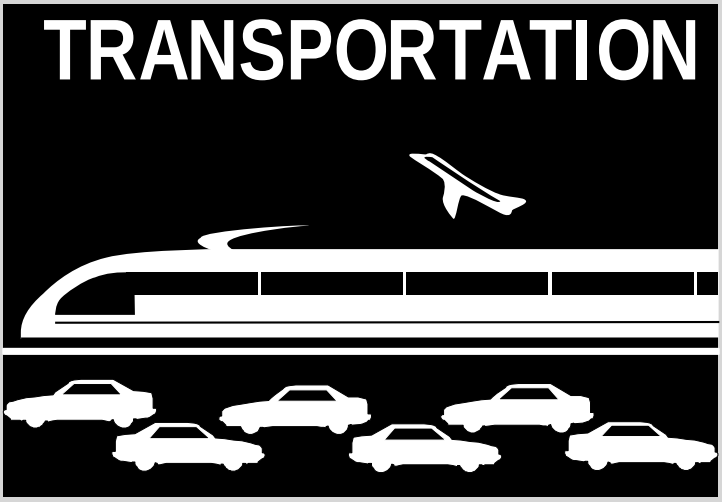
TRANSPORTATION



LAO
55 Years of Service

2001-02 Analysis

MAJOR ISSUES

Transportation

☑ **Traffic Congestion Relief Program Will Take Years to Implement**

- To date, $340 million out of $4.9 billion has been allocated towards 57 projects specified in the Traffic Congestion Relief Program. Given the complexity of some of the projects, it is likely that much of the project-specific funding will not be expended for many years (see page A-33).

☑ **Still Room for Improvement in Caltrans Project Delivery**

- In 1999-00, Caltrans delivered 82 percent of projects that were programmed in the state's transportation plan for delivery in that year. We find that this leaves room for improvement. We recommend that the department report on actions it is taking to expedite project delivery (see page A-38).

☑ **Caltrans Should Reorganize Its Information Technology (IT) Program**

- Significant inefficiencies exist in the way that IT is currently organized and funded at Caltrans. We recommend that the department reorganize the IT staff and functions into one program and create a separate IT budget (see page A-58).

☑ **Electronic Toll Collection System Plagued With Problems; Further Testing Needed**

- We find that Caltrans has not yet fully tested and validated the accuracy of the computer software system used to electronically collect tolls on the state's toll bridges. We recommend that the department report at hearings on its plan to test and complete installation of the system and the risks of the system not functioning as intended (see page A-49).

☑ **Diminishing Role for State Transit Assistance (STA)**

- The STA program constitutes a relatively small portion of total transit funding. This role will diminish further as transit costs increase in the future. We recommend that the Legislature reexamine the state's role in providing operating assistance for public transit and how STA fits into that role. We also provide four options for shaping the future of the STA program (see pages A-27 through A-32).

☑ **Expensive Investments Planned for Intercity Rail; Benefits May Be Less Than Projected**

- Caltrans' latest ten-year rail plan calls for $2.6 billion in capital projects to improve and expand the state's intercity rail service on three corridors. With these significant capital expenditures, Caltrans forecasts that ridership will grow at an average annual rate of 7 percent. Based on past experience, however, we estimate that the increase could be substantially less (see page A-74).

- The budget proposes $98 million for intercity rail capital improvements in 2001-02. It also proposes $9.5 million to support additional round-trip service on the Capitol and San Joaquin corridors. We recommend funding for capital projects on two of the rail corridors (Surfliner and San Joaquin) be deleted because capital improvements made in the past have not resulted in corresponding increases in ridership. For the same reason, we also recommend that funding for expanded round-trip service on the San Joaquin corridor be denied (see pages A-77 through A-81).

☑ **Fraud Persists in Driver License Program**

- In recent years there have been repeated legislative and administrative attempts to curb fraud in driver license issuance. However, the level of driver license fraud remains high. While the administration proposes a new $13.3 million effort to combat fraud, we believe the proposal is not adequately developed (see page A-91).

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OVERVIEW

Transportation

Total expenditures from state funds for transportation programs are proposed to be substantially higher in 2001-02 than estimated current-year expenditures. The increase is due primarily to significantly higher expenditures for state highway and local road improvements, as scheduled in the State Transportation Improvement Program and for seismic retrofit of state-owned toll bridges. A relatively small portion of the increase in expenditures is projected for the delivery of projects included in the 2000 Transportation Congestion Relief Program.

For traffic enforcement, the budget proposes minor increases in the expenditure levels of the California Highway Patrol and the Department of Motor Vehicles.

The budget proposes total state expenditures of about $7.7 billion for all transportation programs and departments under the Business, Transportation and Housing Agency in 2001-02. This is an increase of $742 million, or 11 percent, over estimated expenditures in the current year.

Figure 1 (see next page) shows that state-funded transportation expenditures increased by about $3.5 billion since 1994-95, representing an average annual increase of 9 percent. When adjusted for inflation, these expenditures increased by an average of 6.5 percent annually. The increase is mainly the result of the significant increase in expenditures under the Transportation Congestion Relief Program (TCRP) enacted in 2000-01. The TCRP provided $1.5 billion from the General Fund in the current year for a number of specified projects to be constructed over multiyears. In addition, in March 1996, the voters passed Proposition 192 which authorized $2 billion in bonds for seismic retrofit of highways and bridges. In August 1997, the Legislature further enacted legislation to fully fund seismic retrofit of state-owned toll bridges.

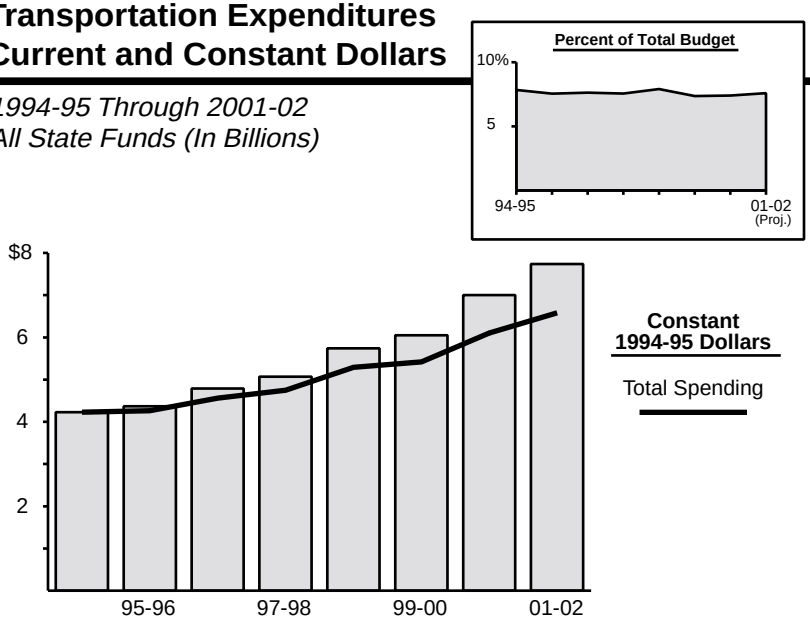
Figure 1 also shows that transportation expenditures as a share of total state expenditures have remained relatively stable since 1994-95. In 2001-02, proposed transportation expenditures will constitute about 7.6 percent of all state expenditures.

Of the 2001-02 state transportation expenditures, about $6.4 billion is proposed for programs administered by the state, and $1.1 billion is for subventions to local governments for streets and roads. Another $285 million will be for debt-service payments on rail bonds issued under Propositions 108 and 116 of 1990, and seismic retrofit bonds issued under Proposition 192 of 1996.

Figure 1

Transportation Expenditures
Current and Constant Dollars

1994-95 Through 2001-02
All State Funds (In Billions)



SPENDING BY MAJOR PROGRAM

Figure 2 shows spending for the major transportation programs in detail. Specifically, the budget proposes expenditures of $9.5 billion (from all fund sources including federal and bond funds) for the Department of Transportation (Caltrans) in 2001-02—an increase of $1.3 billion (15 percent) above estimated current-year expenditures. The higher expenditure level reflects mainly increases of about $1.1 billion in state and federal funds for highway construction and local road improvements.

Spending for the California Highway Patrol (CHP) is proposed at $997.1 million—$19.4 million, or 2 percent, higher than the current-year level. Ninety percent of the expenditures would be funded from the Mo-

tor Vehicle Account. For the Department of Motor Vehicles (DMV), the budget proposes expenditures of $690.7 million, $9.7 million (1.4 percent) more than in the current year. These expenditures would be funded mainly from the Motor Vehicle Account and vehicle license fees.

Figure 2

Transportation Budget Summary Selected Funding Sources

1999-00 Through 2001-02
(Dollars in Millions)

	Actual 1999-00	Estimated 2000-01	Proposed 2001-02	Change From 2000-01 Amount	Change From 2000-01 Percent
Department of Transportation					
State funds	$3,267.6	$4,230.3	$4,855.2	$624.9	14.8%
Federal funds	2,042.2	3,100.1	3,612.4	512.3	16.5
Reimbursements	621.5	946.2	1,086.5	140.3	14.8
Totals	**$5,931.3**	**$8,276.6**	**$9,554.1**	**$1,277.5**	**15.4%**
California Highway Patrol					
Motor Vehicle Account	$794.1	$871.8	$898.5	$26.7	3.1%
Other	128.7	105.9	98.6	-7.3	-6.9
Totals	**$922.8**	**$977.7**	**$997.1**	**$19.4**	**2.0%**
Department of Motor Vehicles					
Motor Vehicle Account	$325.2	$348.0	$349.2	$1.2	0.3%
Motor Vehicle License Fee Account	237.3	258.1	272.8	14.7	5.7
Other	62.1	74.9	68.7	-6.2	-8.3
Totals	**$624.6**	**$681.0**	**$690.7**	**$9.7**	**1.4%**
State Transportation Assistance					
Public Transportation Account	**$100.3**	**$111.8**	**$189.2**	**$77.4**	**69.2%**

Additionally, the budget proposes to fund the State Transportation Assistance program in 2001-02 at $189.2 million, which is $77.4 million (or almost 70 percent) more than the current-year level. The significantly higher funding level reflects the infusion of gasoline sales tax into the Public Transportation Account (PTA) as the result of the TCRP legislation. Annual funding of the program is determined based on a statutory formula, and the level varies depending on anticipated revenues into PTA.

MAJOR BUDGET CHANGES

Figure 3 highlights the major changes proposed for 2001-02 in various transportation programs.

Figure 3

Transportation Programs
Proposed Major Changes for 2001-02

Department of Transportation	**Requested:**	**$9.5 billion**	
	Increase:	**$1.3 billion**	**(+15%)**

- + $922 million in highway construction
- + $278 million in local assistance for road improvement
- + $98 million for capital improvement of intercity rail services
- + $18 million for rural transit capital improvement grants

California Highway Patrol	**Requested:**	**$997.1 million**	
	Increase:	**$19.4 million**	**(+2%)**

- + $8.8 million for additional motorcycle officers
- + $7 million for local grants to collect data on racial profiling
- + $1.7 million to increase inspection of farm labor vehicles

Department of Motor Vehicles	**Requested:**	**$690.7 million**	
	Increase:	**$9.7 million**	**(+1.4%)**

- + $13.3 million to deter and investigate driver license fraud
- + $8.1 million to continue redesign of financial system
- + $6 million to implement vehicle license fee rebate

As the figure shows, the budget proposes to increase highway construction by Caltrans by $922 million, 30 percent more than in the current year. Similarly, local assistance for highway and road improvement is projected to increase significantly, by $278 million, or 29 percent, over the

current-year level. The bulk of the increase is related to the delivery of the State Transportation Improvement Program, seismic retrofit of state-owned toll bridges, and increased reimbursed highway construction for local governments. A relatively small portion of the projected increase is for the delivery of TCRP projects.

The budget does not propose any increase in highway engineering and design support. However, it indicates that the level may be changed in May 2001 when the 2001-02 workload for the State Transportation Improvement Program and TCRP are better identified.

In addition, the budget includes an increase of $98 million for track capacity and signal improvements for intercity rail services. The budget also proposes $18 million for a new program to provide grants to rural transit systems for capital improvements.

For CHP, the budget proposes $8.8 million for 76 additional motorcycle officers to support congestion relief efforts on state highways. The budget also includes $7 million from the General Fund to continue to provide grants in 2001-02 for local collection of racial profiling data. Another $1.7 million is proposed to increase staff to inspect and certify farm labor vehicles for safety compliance.

For DMV, the budget proposes an increase of $9.7 million in total expenditures in 2001-02 over the current-year level. This amount includes a total increase of $18.5 million for departmental support and a decrease of $8.8 million in capital outlay expenditures. Significant increases include $13.3 million to deter and investigate driver license fraud, and $6 million to implement the vehicle license fee rebate program. The budget also requests $8.1 million to continue the redesign of the department's financial and accounting system.

CROSSCUTTING ISSUES

Transportation

CONDITION OF TRANSPORTATION FUNDS

California's state transportation programs are funded by a variety of sources, including special funds, federal funds, and general obligation bonds for transportation. Two special funds—the State Highway Account (SHA) and the Public Transportation Account (PTA)—have traditionally provided the majority of ongoing state revenues for transportation. Additionally, in 2000, the Legislature enacted the Traffic Congestion Relief Program (TCRP) under SB 406 (Ortiz), SB 1662 (Burton), and AB 2928 (Torlakson), (Chapters 92, 654, and 91, respectively). This program creates a six-year funding plan for state and local transportation needs. The program is funded by two new fund sources—the Traffic Congestion Relief Fund (TCRF) and the Transportation Investment Fund (TIF)—funded out of a combination of General Fund revenues (one-time) and revenues from the sales tax on gasoline (ongoing) for six years. The following section discusses the condition of these four accounts.

The SHA Cash Balance Projected to Fall

The 2001-02 budget projects a significant decrease in the State Highway Account cash balance, from an estimated $878 million at the end of 2000-01 to $222 million at the end of 2001-02. Based on past expenditure trends, we find it unlikely that the balance will fall to this level.

The SHA derives its revenues primarily from truck weight fees and the 18 cents state excise tax on gasoline and diesel fuels. Specifically, SHA receives about 62 percent of all gas tax revenues, while the remainder is provided to cities and counties for local streets and roads.

The SHA Cash Balance Projected to Drop to $222 Million. The 2001-02 budget estimates SHA's total resources to be $3.4 billion, which is about 16 percent lower than estimated 2000-01 resources. The decline is primarily due to two factors. First, the budget projects a lower balance being carried over from 2000-01, as a result of 17 percent higher estimated expenditures in 2000-01 compared to 1999-00. Secondly, the budget projects a substantially higher level of funds to be transferred from SHA to fund the seismic retrofit of state-owned toll bridges.

While SHA resources are projected to decline, SHA expenditures are projected to grow. Specifically, the budget proposes an increase in SHA expenditures of approximately $108 million, or 3.2 percent, above estimated expenditures for 2000-01. The combination of a lower beginning balance and a higher level of expenditures brings the projected SHA cash balance down to $222 million by the end of 2001-02, the lowest level in five years.

Actual Cash Balance Likely to Be Higher Than Projected. Historically, the budget has significantly underestimated the size of the SHA cash balance (please see our *Analysis of the 1999-00 Budget Bill*, page A-19). For instance, the 1998-99 budget projected the cash balance to be $856 million at the end of 1998-99, while in actuality it was $1.4 billion. Similarly, the 1999-00 ending cash balance was projected to be $1.1 billion, compared to the actual balance of $1.4 billion. Given past experience, we find it highly unlikely that SHA's cash balance will fall to $222 million by the end of 2001-02. Whether or not the balance falls to this low level will depend on how fast Caltrans and local agencies can deliver projects.

Traffic Congestion Relief Program Projected to Provide More Funding Than Anticipated

Due to higher-than-anticipated revenues from the sales tax on gasoline, funding for the Traffic Congestion Relief Program is estimated to be $1.3 billion higher (over the six-year period) than originally estimated at the time the program was enacted. Under current law, this additional funding will be split between local street and road maintenance, the State Transportation Improvement Program, and the Public Transportation Account.

Substantial Funding Provided by TCRP. In 2000, the Legislature and administration enacted TCRP which provides a substantial amount of new funding for transportation from 2000-01 through 2005-06. Figure 1 shows the estimated funding sources and levels of TCRP and how funds are allocated. As shown in Figure 1, TCRP is funded in 2000-01 by $1.5 billion from the General Fund and $500 million from gasoline sales tax rev-

enues. Annually thereafter through 2005-06, TCRP is funded from revenues from the sales tax on gasoline that previously were deposited in the General Fund. (A portion of the sales tax on gasoline is deposited in PTA.)

Figure 1

Traffic Congestion Relief Program Funding Levels and Uses

(In Millions)

	2000-01	2001-02	Annually 2002-03 Through 2005-06	Six-Year Total
Fund Sources and Levels				
General Fund	$1,500	—	—	$1,500
Sales tax on gasoline[a]	500	$1,105	$1,276	6,710
Totals	**$2,000**	**$1,105**	**$1,276**	**$8,210**
Fund Allocations				
Traffic congestion relief projects	$1,600	$678	$678	$4,990
Local streets and roads	400	171	239	1,528
STIP[b]	—	171	239	1,128
Public Transportation Account	—	85	120	564
Totals	**$2,000**	**$1,105**	**$1,276**	**$8,210**

[a] State portion of sales tax on gasoline which was formerly deposited into the General Fund.
[b] State Transportation Improvement Program.

These monies are distributed to two new funds—TIF and TCRF as shown in Figure 2 (see next page). Funding for TIF fluctuates depending on the price and amount of gasoline consumed, whereas funding for TCRF is set in statute. Specifically, for 2000-01, TCRF received a total of $2 billion, consisting of $1.5 billion from the General Fund and $500 million in revenues from the sales tax on gasoline. Of that amount, $1.6 billion was designated towards 141 designated projects, while $400 million was designated for local street and road maintenance.

From 2001-02 through 2005-06, TIF receives all revenues generated from the sales tax on gasoline that were previously deposited into the General Fund. Of this amount, $678 million will be transferred annually to TCRF for 141 designated transportation projects. The remainder will be distributed as follows:

- The State Transportation Improvement Program (STIP) (40 percent).
- Local street and road repairs (40 percent).
- The Public Transportation Account (20 percent).

Figure 2

Traffic Congestion Relief Program Funds

(In Millions)

Fund	2000-01	2001-02	Annually 2002-03 Through 2005-06
Transportation Investment Fund (TIF)	None	$1,105[a]	$1,276[a]
Traffic Congestion Relief Fund (TCRF)			
TIF transfer		678	678
General Fund transfer	$1,500	—	—
Sales tax on gasoline revenues	500	—	—

[a] Projected average revenues to be transferred to TIF. Includes statutory transfer to TCRF.

High Fund Balance Projected for TCRF in 2001-02. The budget estimates that of the $2 billion available in TCRF in 2000-01, only $805 million will be expended in the current year, including $400 million for local street and road repairs and $405 million on specific projects. This will leave an estimated balance of $1.2 billion at the end of 2000-01. This balance carries forward into 2001-02 and when added to the annual transfer of $678 million, results in total TCRF resources of about $1.9 billion in 2001-02. Because the budget projects expenditures of only $680 million in 2001-02, TCRF is forecast to end the budget year with a fund balance of $1.2 billion.

Higher-Than-Anticipated Revenues for Transportation Investment Fund. Due to higher-than-anticipated revenues from the sales tax on gasoline, the budget projects that a total of $8.2 billion will be available from 2000-01 through 2005-06 to fund TCRP. This is $1.3 billion, or 25 percent, more than earlier estimates. Whether or not actual revenues reach this level will depend on the price of gasoline and amount consumed. The budget assumes that gasoline prices will rise 9 percent in 2001 above 2000 prices.

Because statute specifies the amount to be transferred to TCRF each year, any unanticipated additional revenues will be distributed among the STIP, local street and road repairs, and PTA. For the five-year period,

current estimates indicate that the STIP and local street and road repairs will each receive $520 million more than anticipated, while PTA will receive an additional $260 million. For the budget year alone, TIF is projected to provide approximately $1.1 billion in total, about $130 million more than the original estimate.

The PTA Shortfall Averted; Substantial Funds Available for Legislative Priorities

The Public Transportation Account provides a source of state funds primarily for mass transportation (including bus and rail) purposes. Recent increases in revenues generated from diesel fuel and gasoline sales, combined with revenues provided under the Transportation Congestion Relief Program substantially augment the account's resources from 2001-02 through 2005-06. With this increase, we project a sizable amount of uncommitted funds totaling approximately $264 million in 2001-02 and another cumulative total of $261 million over the subsequent four years (2002-03 through 2005-06). These additional funds provide the Legislature more financial resources to meet its public transportation priorities.

The PTA was established by the Transportation Development Act (TDA) of 1971, in order to provide a source of state funds primarily for transit (including bus and rail) purposes. Historically, the three largest expenditures from the PTA have been the State Transit Assistance (STA) program, intercity rail services, and transit capital improvements. Under current law, the STA program receives at least 50 percent of annual PTA revenues. (For an in-depth review of STA, please see Item 2640.) The remaining PTA funds support various other public transportation purposes, including intercity rail service, capital improvements of transit systems, rail and mass transportation planning and support, and high-speed rail development. In the current year, PTA also supports new programs, such as the Bay Area Water Transit Authority, ferry operating costs on the San Francisco Bay, and a farm worker transportation safety pilot project.

Previously Projected Account Shortfall. In January 2000, we released a report on the condition of the PTA (please see our report entitled *Public Transportation Account: Options for Addressing Projected Shortfall*). In the report, we projected a funding shortfall in the PTA of about $158 million over six years (between 2000-01 through 2005-06). To address the shortfall, the Legislature and Governor provided additional funds in the 2000 TCRP to supplement PTA revenues under TDA.

The TDA Revenue Sources. Under TDA, the two main sources of revenue into PTA are sales and use taxes on diesel fuel and gasoline. The

largest source is a 4.75 percent sales tax on diesel fuel. The second major source is a 4.75 percent sales tax on 9 cents of the state excise tax on gasoline. In addition, PTA receives any excess revenue generated from a 4.75 percent sales tax on all taxable goods, *including* gasoline, as compared to a 5 percent rate on all taxable goods, *excluding* gasoline. (Such a mechanism holds the General Fund harmless, but provides additional revenues to PTA.) In 2001-02, the Department of Finance (DOF) projects that total revenues for PTA from TDA sources will be about $293 million. Figure 3 shows resource and expenditure estimates for the budget year, as well as for the subsequent four years (2002-03 through 2005-06). The figure also summarizes estimates for uncommitted funds in the budget year and future years.

Figure 3

Public Transportation Account Condition

(In Millions)

	2001-02	2002-03 to 2005-06 Four-Year Total
Resources		
Beginning reserve	$261	—
TDA revenues	293	$972
TCRP revenues	132	658
Other[a]	41	107
Totals	**$727**	**$1,737**
Expenditures		
State Transit Assistance	$189	$725
Support[b]	54	223
Intercity rail		
Existing service and maintenance	69	286
New service	10	156
Capital improvements	98	—
Other	44	86
Totals	**$463**	**$1,477**
Uncommitted Funds	**$264**	**$261**

[a] Includes interest and various transfers.

[b] Includes transportation planning, administration, CTC, rail safety, high speed rail development, and transportation research.

Totals may not add due to rounding.

The TCRP Revenue Streams. In addition to the traditional TDA revenue sources, the 2000 TCRP provides additional revenues to PTA for a six-year period through 2005-06. These include a portion of the sales tax on gasoline that was previously deposited in the General Fund (as discussed earlier), and a transfer of SHA revenues that are not restricted in use by Article XIX of the State Constitution. In the budget year, DOF estimates these two sources will total about $132 million.

New Revenue Sources and High Fuel Prices Provide Substantial New PTA Funds. Due to the combination of high fuel prices over the past calendar year and the infusion of additional funds under TCRP, DOF projects PTA to have more than sufficient funds to cover existing programmatic and support expenditures over the next five years, from 2001-02 through 2005-06.

In addition, as shown in Figure 3, we project a substantial amount of uncommitted PTA revenues to be available to meet legislative priorities. Based on revenue forecasts generated by DOF and expenditure projections from Caltrans, we estimate total uncommitted funds to be about $264 million in 2001-02 if all expenditure proposals in the Governor's budget are funded. These expenditure proposals include funding all existing programs as well as making significant ($98 million) capital expenditures on intercity rail and funding other new initiatives. For 2002-03 through 2005-06, we estimate the total amount of uncommitted PTA funds to be about $261 million.

Uncommitted PTA Funds Available for Legislative Priorities. The sizable projected balance provides the Legislature with an opportunity to fund its public transit priorities. The Legislature could direct the California Transportation Commission (CTC) to program a specified amount of the remaining uncommitted PTA funds in the STIP for new local and regional transit capital improvement projects. The Legislature also could direct a portion of the funds for its own public transit priorities. For example, the Legislature could appropriate the uncommitted funds for new statewide public transportation purposes. We provide the following options for consideration.

Option: Assistance for Complying With Air Resources Board Bus Fleet Emissions Rule. In 2000-01, the California Air Resources Board (ARB) adopted new regulations to reduce harmful air emissions (mainly particulate matter and nitrogen oxide) from urban transit buses. As a result, transit operators will have to either retrofit engines and use low-sulfur diesel fuel, or shift their fleet to an alternative fuel, such as compressed natural gas. In addition, the rules require large transit agencies (those with more than 200 buses) to have zero-emission buses comprise at least 15 percent of their bus purchases. The rules call for phased implementation, from 2003 through 2010.

Based on rough cost estimates from ARB and transportation planning agencies, we estimate total statewide costs to transit operators for a seven-year period (2002-03 through 2008-09) to range from $40 million to $70 million. The Legislature could appropriate uncommitted PTA funds for a multiyear program to assist transit operators with the costs associated with ARB's transit fleet rule.

Option: Lifeline Public Transit Competitive Grant Program. Lifeline transit services include paratransit and Americans with Disabilities Act (ADA) transportation services for the elderly and disabled who otherwise are unable to access traditional fixed-route transit service. In addition, lifeline services include additional public transportation to underserved areas. These services also include additional transit services during times of the day not served well with existing systems. Such transit services are important for lower-income families, disabled persons, and the elderly to access jobs, schools, and health services.

According to the study conducted by CTC, pursuant to Senate Resolution 8 (Burton, 1999), the state faces a funding shortfall of about $236 million for capital acquisitions and operating support for existing paratransit and ADA transportation services over ten years (2000-01 through 2009-10). In addition, the San Francisco Bay Area Metropolitan Transportation Commission has identified a need in the Bay Area region for additional operating assistance for lifeline transit services of about $24 million annually.

Currently, the state receives limited assistance (about $6 million in 2000-01) through the Federal Transit Administration's Job Access and Reverse Commute (JARC) grant program. Under JARC, federal funds are matched with local or state resources and may be used for both capital acquisition projects as well as for operating assistance. While JARC is designed to primarily improve mobility for welfare recipients and low-income persons, the Legislature could fashion a lifeline transit competitive grant program similar to the federal program that would also provide grants for paratransit and ADA services.

In the budget year, Caltrans proposes $18 million from PTA for a rural transit assistance program (see discussion in Item 2660). To the extent the Legislature deems that proposal worthwhile for funding, it could consider combining the rural transit program with a lifeline transit assistance program.

Other Options. In our discussion of the STA program (see Item 2640), we offer options to target STA funds to particular transit program areas in order to enhance the effectiveness of STA. The Legislature could also consider directing a portion of the uncommitted PTA funds to those options.

DEPARTMENTAL ISSUES

Transportation

SPECIAL TRANSPORTATION PROGRAMS (2640)

STATE TRANSIT ASSISTANCE

The State Transit Assistance (STA) program is one of the state's primary sources of financial support for public transportation. The program will provide approximately $111.8 million to over 100 transit operators statewide in 2000-01, largely to support public transportation operating costs. For 2001-02, the budget proposes $189.2 million for STA, an increase of 69 percent over the current year.

In the following sections, we review:

- How the STA program is funded and how funds are distributed to transit operators.
- How the program operates in practice and how funds are utilized by transit operators.
- Recommendations and options for legislative consideration.

Purpose and Priorities of STA

Established by the Transportation Development Act, current law specifies the purpose of the State Transit Assistance program to be similar to the act's other programs—to provide financial operating and capital acquisition assistance to transit operators.

Law Specifies Four Priorities for Use of STA Funds. The Transportation Development Act of 1971 (TDA) established two sources of funds that provide substantial support for public transportation services statewide—the Local Transportation Fund (LTF) and the Public Transportation Account (PTA). Under LTF, counties receive revenues from a one-quarter percent sales tax on all goods statewide for transportation purposes. These funds can be used for transit planning, construction and operations, as well as for local streets and roads after transit needs are met. The STA program is funded from PTA revenues. State law specifies the purpose of the STA program to be the same as the use of LTF money—to provide financial assistance for public transportation service, including funding for transit planning, operations, and capital acquisition projects. The act also enumerated four priorities for the use of STA funds, which include:

- Offsetting reductions in federal operating assistance.
- Assisting with increases in the cost of fuel.
- Enhancing existing public transportation services.
- Meeting high-priority regional public transportation needs.

How STA Is Funded and Distributed

The State Transit Assistance program is funded through the Public Transportation Account. Program funds are disbursed to transportation planning agencies by statutory formulas based on population and transit revenues. Transportation planning agencies in turn allocate funds to transit operators to support operating costs and capital acquisition projects.

State Transit Assistance Receives Half of PTA Revenues. As explained above, STA is funded by PTA revenues. Under current law, PTA revenues are generated from a portion of the state sales tax on diesel fuel and gasoline. (For a more detailed description of PTA revenue generation, please see our January 2000 report *Public Transportation Account: Options to Address Projected Shortfall*.) Of the annual revenues generated by the account, statute designates 50 percent to fund the STA program.

Funds Distributed According to Population and Revenue-Based Formulas. Program funds are disbursed by the State Controller to 49 transportation planning agencies (TPAs) statewide according to formulas specified in statute. Under current law, 50 percent of STA funds are distributed based on population, and the remaining 50 percent of funds are distributed based on transit revenues.

Transportation Planning Agencies Allocate STA to Transit Operators. The TPAs in turn allocate STA funds to eligible public transit operators under their jurisdiction. For the revenue-based portion, the TPAs allocate the funds to individual transit agencies based on the ratio of a transit agency's revenues to all transit agency revenues in the TPA's area for the prior fiscal year. As for the population-based portion, however, TPAs generally have more discretion over how these STA funds are allocated. Depending on the TPA's adopted allocation policy, in some cases a portion may be retained for regional public transportation purposes.

State Transit Assistance Used for Both Operating and Capital Acquisition Support. Because STA revenues are derived from the state sales tax, they are not restricted by Article XIX of the State Constitution, which prohibits the use of state gasoline and diesel fuel excise tax revenues for operational support of public transportation and the acquisition of transit rolling stock (such as buses or passenger trains). Therefore, at the discretion of transit agencies, STA funds may be used for both operating costs and for transit capital projects, such as the purchase of vehicles or improvements to passenger rail facilities. Because the STA program is the only source of *state* transportation funds that may be used for transit operating support, all transit operators we interviewed stated that STA funds were valuable because they were not restricted in their use.

How STA Program Functions

While State Transit Assistance (STA) funds are spread across many transit agencies, the ten largest transit operators, in terms of total passengers carried, received 72 percent of all STA funds in 1998-99. Overall, STA revenues are a small component of transit agencies' budgets. The majority of STA funds are used for operating expenses.

Because of limitations on available data, we had to use different years for the following analysis. Our review of the use of STA funds by transit agencies is based upon the most recent data available from the State Controller for 1998-99. As regards STA allocations to individual TPAs, we used data for 1999-00. While funding levels and actual allocations may fluctuate from year to year, these fluctuations are not substantial enough to invalidate our general findings.

Close to Half of Transit Providers Received No STA Funds. In 1998-99, almost half of the transit agencies (103 out of 212) received no STA funds. Based on discussions with Caltrans' staff and officials from TPAs, we have concluded that several factors account for this, including:

- ***Limited Number of Allocations***. Several TPAs receive a relatively small amount of population-based STA funds and little to no rev-

enue-based funds because the operators in their area are proportionally small compared to the rest of the state. In these cases, a TPA may limit the number of transit operators receiving STA allocations in order to pool funds to make allocations of useful size.

- ***Cumbersome Auditing and Reporting Requirements***. Some transit agencies may choose not to claim TDA funds (both STA and LTF revenues) because the cumbersome auditing and reporting requirements under current law outweigh the small amount of funds they would receive.

- ***Fund-Sharing Agreement Between Transit Operators***. Some transit agencies have negotiated fund-sharing agreements among themselves. For example, the Alameda-Contra Costa Transit District (AC Transit) receives the majority of the San Francisco Bay Area Rapid Transit District's (BART) STA funds in return for bus transportation services provided for BART customers. Though infrequent, there may be other cases where agencies share STA funds for mutual benefit.

Huge Variation in Size of STA Allocations. Excluding the 103 agencies that received no STA support, the average STA allocation in 1998-99 was about $863,000. Allocations, however, are skewed toward large transit operators. As a result, the median allocation was significantly lower, at about $110,000. Interestingly, the largest and smallest allocations occurred in the same county for that fiscal year—Los Angeles. The state's largest STA allocation—about $27 million—was provided to the Los Angeles County Metropolitan Transportation Authority (LACMTA), and the smallest—$2,950—was allocated to the City of Claremont. Figure 1 lists the ten largest and smallest STA allocations for 1998-99.

Large Operators Utilize Vast Majority of STA Funds. The ten largest transit operators (based on ridership) transported 79 percent—about 980 million passengers—of the state's total ridership in 1998-99. As shown in Figure 2 (see page 26), these same agencies received approximately 72 percent ($68 million) of total STA funds. Indeed, 95 percent of all STA funds were utilized by only 51 agencies, which carried 93 percent of the state's total transit ridership. The remaining $5 million was allocated to 58 other transit operators during that year.

From the TPA perspective, over two-thirds of all STA revenues are shared between two TPAs. In 1999-00, the Metropolitan Transportation Commission (MTC), the TPA for the nine-county San Francisco Bay Area, was allocated $38.3 million, while LACMTA was allocated $29.7 million. This finding is not surprising, however, as the largest urban centers and transit operators are located in their respective jurisdictions.

Figure 1

State Transit Assistance
Ten Largest and Smallest Allocations in 1998-99

(In Thousands)

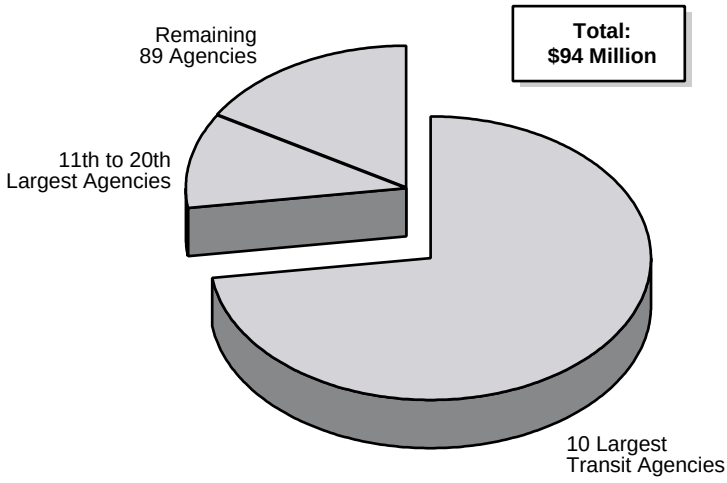
Transit Provider	County	Amount	Ridership
Ten Largest Allocations			
LACMTA	Los Angeles	$27,312	379,235
SF Municipal (Muni)	San Francisco	9,741	217,050
Alameda-Contra Costa Transit	Alameda	8,874	65,668
Orange County Transportation Authority	Orange	6,162	56,330
Santa Clara Valley Transportation Authority	Santa Clara	4,457	55,495
San Diego Transit	San Diego	3,951	39,109
Sacramento Regional Transit	Sacramento	2,960	28,578
Long Beach Public Transportation	Los Angeles	4,153	27,302
San Mateo County Transit	San Mateo	3,364	17,985
Peninsula Corridor (Caltrain)	San Mateo	1,558	8,622
Ten Smallest Allocations			
Mariposa County	Mariposa	$15	13
Morro Bay	San Luis Obispo	12	45
Lincoln	Placer	10	31
Waterford	Stanislaus	9	9
Turlock	Stanislaus	4	95
Stanislaus County	Stanislaus	4	190
San Luis Obispo	San Luis Obispo	4	900
Redondo Beach	Los Angeles	3	93
Auburn	Placer	3	36
Claremont	Los Angeles	3	44

State Transit Assistance Small, But Important, Component of Agencies' Budgets. For the ten largest transit operators, STA funds comprised, on average, only about 3.2 percent of their total resources in 1998-99. In discussions with several large operators, they indicated that nonetheless, STA has been a stable and predictable fund source that is built into their baseline budget projections for the past several years. For example, STA funds accounted for only 1.1 percent of LACMTA's and about 2 percent of San Francisco Municipal's (Muni) total resources respectively in 1998-99. According to these officials, however, it would be difficult for LACMTA and Muni to backfill $27 million and $9.7 million respectively if these revenues were lost.

Figure 2

Distribution of STA to Transit Agencies

1998-99



For small transit operators, STA allocations on average represented a significantly larger portion of their overall budget. For example, 5 percent of total STA funds (or $5 million) was allocated to 58 agencies in 1998-99. On average, STA funds comprised 13 percent of total resources for these small transit providers, and in nine cases, STA revenues accounted for over 20 percent of their total resources.

The STA Supports Small Paratransit Service Providers. The above mentioned 58 smallest transit providers that utilize the remaining 5 percent of STA funds largely provide community transit services in addition to traditional public transportation. Community transit services include primarily paratransit services for those, such as the elderly and disabled, who cannot use conventional transit services. Even though these are small operations, transporting only one-half percent of the state's overall public transportation ridership in 1998-99, they carried a disproportionate number (over 19 percent) of the state's paratransit riders.

Majority of STA Funds Utilized for Operations. Of the $94 million allocated in 1998-99, about $79 million (or 84 percent) was used to cover operating expenses. These expenses include staff salaries, maintenance expenses, as well as vehicle fuel and insurance costs. The remaining funds were used for capital projects, such as vehicle acquisition and facilities

improvements. Generally, the large transit operators use their STA allocations to support operating costs. For instance, AC Transit, LACMTA, San Francisco Muni, the Santa Clara Valley Transportation Authority, the Orange County Transportation Authority—all used their STA allocations to support transit operations rather than capital projects in 1998-99.

The STA Program Meets Legislative Priorities

In general, State Transit Assistance achieves its legislative priorities by enhancing existing public transportation services and supporting high-priority regional transit needs.

The STA Program Generally Meets Statutory Priorities. Based on our review, STA generally achieves the four above-mentioned legislative priorities. However, the priorities were specified when the program was created over 20 years ago and may no longer be as pertinent as when STA was established. For example, during the fuel price spikes of the late 1970s and early 1980s, STA provided relief for transit operators. When fuel prices moderated relative to the rest of the economy, however, its importance as a source of relief for fuel costs to operators was reduced. Today, STA funds are not widely viewed specifically as cost-of-fuel assistance. Instead, STA is largely perceived by transit operators as general state support for operations and, to a limited extent, as funds for capital acquisition projects.

It is, however, important to note the extent to which the program supports the priority of meeting high-priority regional public transportation needs. Given the flexibility TPAs have over the population-based portion of STA revenues, they have utilized the funds for high-priority regional transit projects that might not have been otherwise funded. For example, population-based STA funds support the Southern California Regional Rail Authority's (SCRRA) Metrolink commuter rail system. In the San Francisco Bay Area, MTC plans to use STA funds to operate a new regional express bus system.

Program's Role Is Diminishing

In terms of financial assistance, State Transit Assistance (STA) constitutes a relatively small portion of transit funding. The program's role in funding transit services has diminished when compared to that of the Local Transportation Fund. As public transit operators face increasing costs to provide transit services in future years, the role played by STA will diminish further.

State Transit Assistance Makes Up Small Portion of Transit Funding. While STA represents a fairly substantial expenditure of state funds—averaging about $100 million annually from 1997-98 through 2000-01—

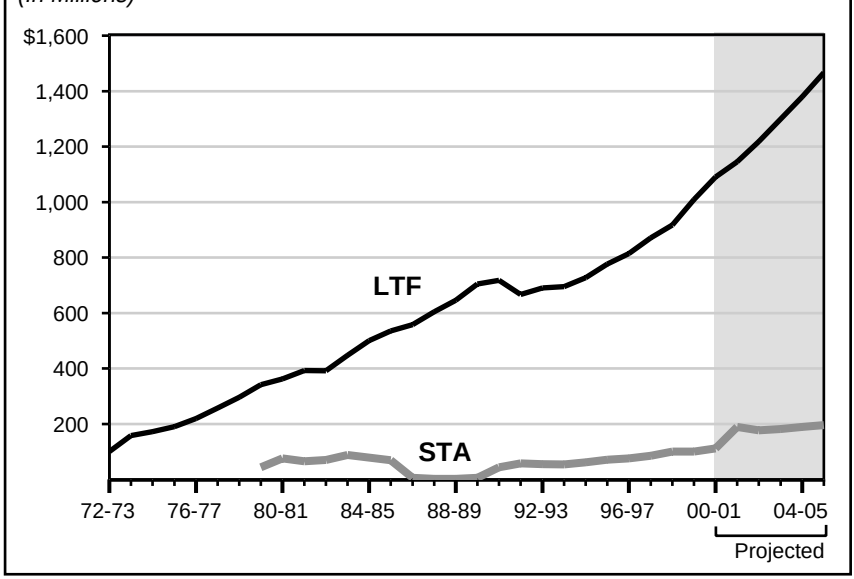
the amount constitutes a relatively small proportion of all resources expended for public transit. Specifically, of all resources for public transit agencies statewide, STA constituted only 1.1 percent in 1990-91 and 1.6 percent in 1998-99.

Relative to LTF, STA Role Is Diminishing. In 1999-00, LTF revenues totaled about $1 billion and accounted for about 12 percent of total transit revenues in the state. Because of the flexibility in how these revenues can be used, LTF constitutes a critical source of local revenues for public transit systems.

Figure 3 shows how LTF funding has grown since 1972 compared to STA funds. As Figure 3 shows, LTF revenues, being sales tax revenues, have grown with inflation and the expansion of the economy. By contrast, STA revenues, being dependent mainly on gasoline and diesel fuel consumption, have stayed relatively flat. As a result, STA's role in transit funding compared to LTF's role has diminished. We project that this trend will continue. As Figure 3 shows, we project the growth in LTF revenues through 2005-06 would continue to outpace the growth in STA funds.

Figure 3

Growth in TDA Revenues



As Transit Operating Expenditures Increase, STA's Role and Effectiveness Will Be Even Smaller. In discussions with urban transit opera-

tors statewide, all indicated that they face increasing operating expenditures in order to sustain current services. This is due to a combination of factors. Specifically, the expansion of bus and rail transit systems over the past two decades have resulted in significant increases in operating costs. In addition, their costs have increased due to various federal and state requirements, such as the Americans with Disabilities Act (ADA) and vehicle emission standards.

According to a recent study, these current funding pressures translate into a funding gap in the future for public transit operations. The *Inventory of Ten-Year Funding Needs for California's Transportation System*, prepared by the California Transportation Commission pursuant to SR 8 (Burton, 1999), estimated that transit operators face a $700 million shortfall in operating revenues to sustain existing levels of transit service over the next ten years.

This gap will likely grow as transit services are expanded. For example, the 2000 Transportation Congestion Relief Program (TCRP) enacted as part of the current-year budget plan, provided substantial funds for public transit projects. Our review found that, once the TCRP projects are completed, annual operating costs for just these projects will be between $247 million and $280 million. Only a portion of these costs will be covered by passenger fares. To address the funding gap, transit operators have several options. These include reducing costs through efficiency measures, increasing passenger fares, levying additional local taxes, approaching the state for additional assistance, or cutting service.

Assuming that transit operating costs continue to increase and STA's revenue stream remains relatively flat, STA's role in providing transit services will continue to diminish. As such, the program's effectiveness in meeting the statutory goals of enhancing transit services will also decline.

State Should Reexamine Role of Assisting Public Transportation

We recommend that the Legislature reexamine the state's role in providing operating assistance for public transit and how State Transit Assistance fits into that role.

Current State Role. Currently, the state approaches funding for public transit from two directions. On one side, state funding in general adheres to the policy established by Chapter 622, Statutes of 1997 (SB 45, Kopp). Under that legislation, local and regional transportation, including public transit, is considered a local and regional responsibility, while the state is responsible for interregional transportation. Consequently, the majority of state funds allocated for mass transportation is for intercity rail projects that improve mobility on passenger rail among regions of

the state. Commuter and local public transit service is considered a regional and local matter.

However, with the passage of TCRP, the Legislature and Governor sponsored a substantial investment in public transportation systems throughout the state totaling $2.8 billion over six years (2001-02 through 2005-06). The large majority of these investments are for regional and local public transit.

Recommendation. Given the diminishing role of STA on the one hand, and the state's encouragement for public transit systems to expand services as indicated by TCRP on the other, as well as the projected gap in transit operators' funding, we recommend that the Legislature reexamine (1) the state's role in providing operating assistance for public transportation and (2) how STA fits into that role.

Four Options for STA

We provide four options for shaping the future of State Transit Assistance (STA)—maintain the status quo, substantially expand the size of the program, sunset STA, or target STA funds at more specific goals.

With respect to STA, we offer four options for legislative consideration. These options include: maintain the status quo, substantially increase STA funding, sunset STA, or target STA at more specific goals. The appropriate option would depend on the Legislature's priorities and policy decision regarding the state's role in providing financial assistance for transit services.

Maintain Status Quo. One component of TCRP provides an increase in funds to PTA and, ultimately, to the STA program. In 2001-02, the Department of Finance projects STA revenues to be about $89 million more than the 1999-00 appropriation. However, relative to growing operating costs, this increase will not provide substantive additional assistance to California's transit operators. Furthermore, TCRP sunsets in 2005-06 and the current sales tax revenues diverted to PTA will revert to the General Fund at that time.

Therefore, under current practice, STA will continue to be a small program relative to both the size of other transit revenue sources and to the growing costs associated with providing public transportation. The program will play a diminishing role in terms of its importance as a state program to assist with transit operating costs. Consequently, the state will have little leverage in shaping or guiding the provision of public transit service through STA.

Substantially Increase STA Funding. When considering potential alterations to STA, one option would be to provide a substantial increase in revenues. For example, according to the New York State Department of Transportation, the State of New York distributes over $1.6 billion annually to over 130 transit operators statewide primarily through the State Mass Transportation Operating Assistance program. Funds are disbursed to individual operators utilizing a per-passenger and per-vehicle-mile formula. If the Legislature wants to encourage continued expansion of public transit as an alternative mode of transportation, it may want to consider significantly increasing STA funding for operating assistance to operators.

Potential fund sources for an augmentation include increasing STA's share of PTA revenues or an additional transfer of General Fund monies. Such an augmentation in operating assistance, however, requires both a new state perspective on its role in regional and local transit service delivery and a commitment to continue providing substantive financial assistance in the long term. If the augmentation were provided, the Legislature could establish additional service performance criteria to help ensure that state funds are used most effectively.

Sunset STA Program. If the Legislature and Governor determine that the state should focus its funding on interregional transportation and not provide regional and local transit assistance, one option is to sunset the STA program, with PTA revenues that formerly went to STA purposes redirected to fund other public transportation purposes including transit capital improvement projects and intercity rail service. In order to hold transit operators harmless financially, an additional state sales tax amount could be diverted to LTF. While this would provide transit operators with a revenue source that is stable and more likely to grow in the future, it would require diverting funds away from the state General Fund.

Target STA Towards More Specific Objectives. This option recognizes that, while the STA program is a substantial funding amount by itself, it plays a small role in financially assisting public transit statewide. The Legislature could establish more specific objectives and priorities for STA than currently. Doing so would target funds towards achieving more particular policy outcomes. For example:

- ***All Urban STA.*** The Legislature could determine that the state should concentrate STA funds where public transit service generally serves the largest number of riders—in the largest urban areas. This option would provide a modest boost in additional flexible STA funds to the largest operators, but could have a potentially onerous impact on the state's suburban and rural operators, particularly those operators providing paratransit services.

- ***Suburban and Rural STA.*** Alternatively, the Legislature could reconfigure STA to provide assistance exclusively to the smaller suburban and rural transit operators who carry relatively small numbers of riders but incur high annual mileage on their vehicles. Because these agencies' budgets are small relative to the largest urban operators, a small increase in STA funds could provide a substantive increase in operating assistance. As mentioned above, however, the largest operators would have difficulty backfilling a loss of their STA allocations.

- ***Americans With Disabilities Act STA.*** In discussions with numerous transit operators, meeting ADA requirements and providing paratransit services to those who cannot otherwise utilize existing fixed-route transit services is increasingly creating a heavy financial burden. The Legislature could decide that STA funds should be focused to support community transit needs, such as ADA paratransit requirements. The program could be restructured to fund paratransit services exclusively statewide.

- ***Jobs Access STA.*** Transit operators have also explained that providing off-peak, reverse commute, and other forms of non-traditional public transportation service is expensive. Therefore, many operators cannot afford to operate these services. Unfortunately, many jobs for lower-income families and welfare recipients require access to reliable transportation during off-peak hours (such as late at night or early in the morning) or in reverse commute directions (from the urban core out to suburban areas). The Legislature could refashion STA to provide assistance to transit operators for these types of nontraditional, "jobs access" services.

The Legislature may want to consider funding a combination of the above targeted uses for STA, as several of the options (particularly the ADA and Jobs Access uses) would not likely utilize the entire amount of STA funding.

DEPARTMENT OF TRANSPORTATION (2660)

The Department of Transportation (Caltrans) is responsible for planning, coordinating, and implementing the development and operation of the state's transportation systems. These responsibilities are carried out in five programs. Three programs—Highway Transportation, Mass Transportation, and Aeronautics—concentrate on specific transportation modes. Transportation Planning seeks to improve the planning for all travel modes and Administration encompasses management of the department.

The budget proposes expenditures of $9.5 billion by Caltrans in 2001-02. This is about $1.3 billion, or 15 percent, more than estimated current-year expenditures. This is largely due to a significant projected increase in capital improvements on state highways, as well as major increases in local assistance expenditures for local street and road and mass transportation projects.

TRAFFIC CONGESTION RELIEF PROGRAM

Implementation of Congestion Relief Program Will Take Many Years

To date, $340 million has been allocated towards 57 projects specified in the Traffic Congestion Relief Program. Given the complexity of some of the high-cost projects, it is likely that much of the project-specific funding will not be expended for many years.

Background. In 2000, the Legislature enacted the Traffic Congestion Relief Program (TCRP) to provide additional funding for transportation over a six-year period. The program includes an estimated $8.2 billion in new funds for transportation, funded from sources that were previously deposited in the General Fund. Of this amount, approximately $4.9 billion is designated for 141 projects that were specified in statute, with the remainder divided among the State Transportation Improvement Program (STIP), local street and road maintenance, and the Public Transpor-

tation Account (PTA). (Please see "Condition of Transportation Funds" in the Crosscutting Issues part of this chapter for a discussion of the funding components of the program, including proposed expenditure levels in the budget.)

Of the $4.9 billion project-specific funding, 45 percent goes for highway projects (including 17 percent to carpool lanes and 28 percent for highway interchange and general purpose lane expansion). The remaining 55 percent is divided among rail (41 percent), bus (9 percent), and transit right-of-way (5 percent).

Program's Guidelines Allow Projects to Be Funded in Phases. In order to receive funding for the projects specified in TCRP, project sponsors must submit a project application to the California Transportation Commission (CTC) containing information regarding the cost, scope, and schedule for the project. The application may cover only one phase of the project, such as environmental review, several phases, or the entire project through construction. The application must specify the amount of funds anticipated to complete the work identified. Once a project application has been approved, the project sponsor may then request an allocation for any amount up to the amount approved in the application. Once funds have been allocated, the project sponsor has up to three years to encumber the funds and five years to spend them.

Many Project Applicants Request Only Partial Funding. To date, applications for 57 out of the 141 projects have been approved by CTC. (The TCRP specifies $2.3 billion for these 57 projects.) The applications have requested approval for $626 million, or 27 percent, of total project costs.

Of the $626 million identified in the applications, project applicants have requested and received *funding allocations* for only $340 million. Project sponsors may submit funding allocation requests for the remainder of the amount approved in the project application at any time.

Project Applications Evenly Divided Between Mass Transportation and Highway Projects. With respect to the *type* of projects that have been approved, 22 are highway projects, 23 are mass transportation projects, eight are air quality and local road projects, and four are for project studies.

Most of the mass transportation projects are for initial work on light rail or commuter rail extension projects. The total amount of funding allocated to these projects is $167 million out of $224 million approved in the project applications. With respect to highway projects, $112 million was allocated out of $291 million approved in the project applications.

Project Applications Due in 2002, But Funds May Not Be Spent For Many Years. Project applications for the remaining 84 projects must be

submitted to CTC by July 6, 2002. However, as described, CTC's guidelines allow project sponsors to submit applications by project phases and to request only partial funding allocation for each project phase. Additionally, a substantial amount of the program's funding is dedicated towards complex projects that will require substantial environmental review and design before moving towards construction, typically the most costly project component. Given these factors, we find it likely that much of the funding will not be expended for many years.

HIGHWAY TRANSPORTATION

Major Increase in Proposed Highway Program Expenditures

The budget proposes expenditures of $8 billion for the highway transportation program, about $1.2 billion, or 17 percent, more than estimated current-year expenditures. This includes a 30 percent increase in proposed capital outlay expenditures, and an 18 percent increase in proposed local assistance expenditures.

The major responsibilities of the highway program are to design, construct, maintain, and operate state highways. In addition, the highway program provides local assistance funds and technical support for local roads. For 2001-02, the budget proposes $8 billion for the highway transportation program, approximately 84 percent of the department's proposed budget. This is an increase of $1.2 billion, or 17 percent, over estimated current-year expenditures. This is due to sizable increases in projected expenditures for capital outlay and local assistance, as discussed below.

Of the $8 billion, the budget proposes $3.9 billion in capital outlay expenditures, an increase of 30 percent above estimated 2000-01 levels. This increase is primarily due to estimated expenditures for projects to be delivered in the five-year STIP. Additionally, the budget proposes sizable increases in expenditures for seismic retrofit of the state's toll bridges, as well as increases for local projects which Caltrans performs on a reimbursement basis.

In addition to increased capital outlay expenditures, the budget proposes a substantial increase in local assistance expenditures, expenditures made by local agencies for nonhighway projects. Local assistance includes STIP as well as TCRP projects. The budget proposes $1.8 billion for local assistance, an 18 percent increase above estimated 2000-01 levels. Approximately 68 percent of local assistance expenditures are funded from federal funds.

Although the proposed increases we have described above are large, they may be somewhat misleading. This is because Caltrans has histori-

cally over-estimated its expenditures for the budget year when submitting its budget proposals. For example, the 1999-00 budget proposed spending $3.9 billion for highway capital outlay, while actual expenditures were $2.2 billion, or 44 percent lower. Similarly, the 1999-00 budget proposed $1.4 billion in local assistance expenditures, while actual expenditures were only $883 million, or 37 percent lower.

As shown in Figure 1, Caltrans expects that state funds would support about $3.5 billion (44 percent) of highway program expenditures. Federal funds would also fund almost $3.5 billion (43 percent) of the program, while the remaining $1 billion (13 percent) would be paid through reimbursements, primarily from local governments.

Figure 1

Department of Transportation
Highway Transportation Budget Summary

1999-00 Through 2001-02
(Dollars in Millions)

Program Elements	Actual 1999-00	Estimated 2000-01	Proposed 2001-02	Percent Change From 2000-01
Capital outlay support	$937	$1,175	$1,191	1.3%
Capital outlay projects	2,238	3,033	3,954	30.0
Local assistance	883	1,530	1,808	18.2
Program development	75	103	89	-13.0
Legal	61	63	63	0.4
Operations	129	169	146	-16.0
Maintenance	771	783	788	0.6
Totals	**$5,094**	**$6,856**	**$8,039**	**17.0%**
State funds	*$2,592*	*$3,070*	*$3,552*	*16.0%*
Federal funds	*1,955*	*2,873*	*3,460*	*20.0*
Reimbursements	*547*	*912*	*1,026*	*12.0*

PROJECT DELIVERY

Project delivery is arguably the most critical variable in Caltrans' mission to improve mobility. Because of concerns over project delays, the Legislature requires our office to report on the department's progress in delivering projects as they are scheduled for construction in the STIP and the State Highway Operation and Protection Program (SHOPP). The sub-

stantial increase in funding provided by TCRP makes this issue that much more significant.

In the following section, we discuss a number of key issues related to project delivery, including STIP and SHOPP delivery in the 1999-00 year, project delivery for the seismic retrofit program, environmental review of STIP and SHOPP projects, and staffing vacancies. In order to ensure that the Legislature is fully informed of the challenges the department faces with respect to project delivery and its plans for addressing them, we recommend that the department report at hearings on a number of these issues.

Caltrans Should Measure Its Performance Using A Fixed Project Delivery Target

We recommend the adoption of budget bill language to require the department to measure its project delivery performance based on what is programmed for delivery that year.

Background. There are several ways by which the delivery of projects can be measured. Caltrans defines delivery as when a project is "ready to list," that is, when it has completed all of the necessary work (for example, design and environmental review of the project) prior to advertising a project for construction. The CTC, on the other hand, defines delivery as when a project has been allocated funding for construction.

Analyst's Approach. In this analysis, we have adopted CTC's definition, using funding allocation as the indicator of project delivery. Although a project that is ready to list is ready for construction in theory, it is possible for a project to reach this point, but not receive a funding allocation due to litigation or other factors. As a result, we find that funding allocation provides a more reliable indicator of which projects have actually been delivered by Caltrans.

Additionally, whereas CTC measures Caltrans' delivery against a fixed number of projects that were *programmed* for delivery that year in the STIP or the SHOPP, Caltrans adjusts its delivery targets during the year to incorporate schedule changes. For instance, if the department receives a schedule extension from CTC for a project that was originally programmed for delivery in 1999-00, it deletes this project from its baseline for what was "planned" for that year. Delivery is thus measured against a smaller number of projects planned for delivery. In this way, Caltrans' delivery reports mask the impact that schedule extensions have on its delivery record for the year. For this reason, we have chosen to use "programmed projects" as our baseline.

It is important to note that this is the first year in which we have reported delivery based on "funding allocation" and "programmed

projects," as opposed to "ready to list" and "planned projects." Accordingly, it is not possible to compare our delivery findings in 1999-00 with our findings in prior years.

The Legislature Needs Accurate Project Delivery Information. Because of the importance of holding Caltrans accountable for its project delivery, we recommend the adoption of budget bill language that would require that the department track its project delivery for the STIP and the SHOPP in terms of what is programmed to be delivered in any given year. Accordingly, we recommend that the following budget bill language in Item 2660-001-0042 be adopted:

> The Department of Transportation shall measure its project delivery relative to the State Transportation Improvement Program and the State Highway Operation and Protection Program. This measurement shall be based on what is programmed for delivery in that fiscal year and shall not be adjusted based on project extensions made during that fiscal year. Additionally, the department shall use "funding allocation" and not "ready to list" as a measure of delivery.

Project Delivery Leaves Room for Improvement

In 1999-00, Caltrans delivered 82 percent of programmed State Transportation Improvement Program (STIP) projects, and 85 percent of programmed STIP expenditures. Additionally, the department delivered 96 percent of programmed State Highway Operation and Protection Program (SHOPP) projects, and 93 percent of programmed SHOPP expenditures. Local agencies delivered 87 percent of programmed STIP projects and 91 percent of programmed STIP expenditures.

Caltrans has established as a goal delivering 90 percent of projects and spending 100 percent of funds *planned* for delivery in the STIP. We find these to be reasonable goals to use when measuring projects *programmed* in the STIP.

Caltrans Delivered 82 Percent of Programmed STIP Projects. According to information provided by CTC, in 1999-00 Caltrans delivered 82 percent of STIP projects that were programmed for delivery in that year. These are projects that expand the highway's capacity or provide intercity rail improvements. As shown in Figure 2, the department delivered 101 of 123 projects that were programmed for delivery in 1999-00. Figure 3 indicates delivery in terms of expenditures, and shows that the department delivered $636 million, or 85 percent of the amount programmed for delivery in 1999-00.

The SHOPP Project Delivery Stronger Than STIP. With respect to SHOPP projects, the department delivered 258 projects, or 96 percent of 269 projects that were programmed for delivery. The SHOPP projects pro-

vide safety, operation, or rehabilitation improvements to the state highway system. In terms of funding allocations, the department delivered $958 million, or 93 percent of $1 billion in programmed funds. In general, SHOPP projects are far less complicated from a design standpoint and require much less extensive environmental review. This makes them much easier to deliver on schedule than STIP projects.

Figure 2

Caltrans Project Delivery by Number of Projects 1999-00

	Projects		
Program	Programmed	Delivered	Percent Delivered[a]
STIP[b]	123	101	82%
SHOPP[c]	269	258	96
Totals	**392**	**359**	**92%**

a Excludes advanced projects.
b State Transportation Improvement Program.
c State Highway Operation and Protection Program.

Department Delivered Some Projects Ahead of Schedule. The calculations of the percent of projects and expenditures delivered in 1999-00 shown in Figures 2 and 3 (see next page) exclude "advanced" projects. These are projects that were not programmed for delivery in 1999-00, but for a number of reasons were delivered anyway in that year. In 1999-00, the department delivered 11 projects in advance of their STIP schedule, bringing total STIP delivery in terms of funding to $751 million. With respect to SHOPP projects, the department also advanced 37 projects from future years, bringing total SHOPP delivery in terms of funding to $1.1 billion in 1999-00.

We support the department's practice of advancing projects ahead of schedule when possible. However, we do not include these projects in our main calculations because the Legislature's primary concern has been how well Caltrans meets its *intended* delivery schedule, which reflects in large part its original priority of projects.

Local Agencies Deliver 91 Percent of Programmed Expenditures. Under Chapter 622, Statutes of 1997 (SB 45, Kopp), local agencies are responsible for determining how to spend 75 percent of STIP funds. To the extent that local agencies decide to spend their share of STIP funds on high-

way capacity improvements, they have traditionally depended on Caltrans to deliver the projects. However, to the extent that they choose to spend their share of funds on transit projects or local road improvements, *they* are responsible for that delivery.

Figure 3

Caltrans Project Delivery by Expenditure 1999-00

Program	Expenditures		
	Programmed	Delivered	Percent Delivered[a]
STIP[b]	$749	$636	85%
SHOPP[c]	1,034	958	93
Totals	**$1,783**	**$1,594**	**89%**

a Excludes expenditures for advanced projects.
b State Transportation Improvement Program.
c State Highway Operation and Protection Program.

In 1999-00, local agencies delivered 801, or 87 percent, of 921 local street and road or mass transit STIP projects programmed for delivery during 1999-00. With respect to funding, local agencies committed to delivering $816 million worth of projects. Of this amount, they delivered $742 million, or 91 percent. Like Caltrans, however, local agencies also advanced a significant amount of projects that were scheduled for future years. Specifically, local agencies advanced 75 projects, or $110 million during 1999-00, resulting in a total delivery of $903 million, or 104 percent of programmed funds.

Local Agencies Significantly Increased Expenditure of Federal Funds. In addition to their relatively strong delivery of STIP projects, local agencies were also able to significantly improve their expenditure of certain federal funds which they receive directly. In the first two years of the 1997 federal transportation act, the Transportation Equity Act for the 21st Century (TEA-21), local agencies underspent their allotment of federal funds by 41 percent in federal fiscal year (FFY) 1998, and 57 percent in FFY 1999. As a result, by October 1999, local agencies had accumulated $1.2 billion in unexpended federal allocations. In FFY 2000, however, local agencies markedly increased their expenditure of federal funds, obligating $1.2 billion or 154 percent of their annual share of federal funds

spending authority. This improvement can be attributed to the deadlines on the use of federal funds put in place by Chapter 783, Statutes of 1999 (AB 1012, Torlakson), as well as the additional technical support provided by Caltrans' local assistance program.

Record Number of STIP Projects Extended to Future Years. According to CTC, while 1999-00 was a year of "high output and achievement" for both Caltrans and local agencies, it was also a year of record schedule revisions. Specifically, $788 million worth of projects were rescheduled in the STIP to be delivered in subsequent years. These projects included some originally scheduled to be delivered in 1999-00 as well as projects to be delivered in later years. Most of the delays were from one fiscal year to the next. However, more than one-third of the delays were for two fiscal years or more. Of the total amount rescheduled, $646 million was for projects programmed to be delivered in 2000-01.

According to CTC, this record amount of rescheduling was primarily in response to a new (1999) CTC policy that restricts the rescheduling of STIP projects to certain circumstances. To avoid those restrictions, both Caltrans and local agencies took advantage of an opportunity to modify any overly optimistic delivery schedules before the new policy took effect. Because the majority of these schedule changes were to delay the construction phase of projects, it is likely that these project extensions will contribute to a high cash balance in the SHA.

Summary. Overall, we find that there is room for improvement in Caltrans' delivery of STIP projects. Although the department allocated all of the funds that were programmed for 1999-00, 18 percent of projects that were programmed for delivery in that year were delayed. The department's delivery of SHOPP projects was significantly stronger. With respect to local agencies, we find that they have substantially improved their delivery, but could still improve above current levels. A variety of factors affect the length of time it takes Caltrans to design and construct a transportation project. In subsequent sections we discuss some of these factors, including staff vacancies and environmental review.

Bridge Seismic Retrofit Program Relatively on Schedule; Toll Bridge Repairs Delayed

Phase 1 of the highway bridge seismic retrofit program is complete. Phase 2 is 97 percent complete. Seismic retrofit of the state-owned toll bridges, however, has been delayed. We recommend that the department report at budget hearings regarding the cause of the delay and the projected impact the delay will have on the program's total cost.

Caltrans inspects all state and local bridges at least once every two years. Since 1971, when the Sylmar earthquake struck the Los Angeles area, Caltrans has had an ongoing bridge retrofit program. The retrofit program involves a variety of different improvements, depending on the needs of the particular structure. The improvements include strengthening the columns of existing bridges by encircling certain columns with a steel casing, adding pilings to better anchor the footings to the ground, and enlarging the size of the hinges that connect sections of bridge decks to prevent them from separating during an earthquake.

Following the 1994 Northridge earthquake, Caltrans expanded its seismic retrofit program for state highway bridges, creating a Phase 1 and a Phase 2 program. Phase 1 included 1,039 bridges identified for strengthening after the 1989 Loma Prieta earthquake at a total cost of $800 million, as shown in Figure 4. These projects were completed by May 2000. Phase 2 consists of an additional 1,155 bridges that were identified for strengthening following the Northridge earthquake. To date, Caltrans has completed the work on 1,126 (97 percent) of the Phase 2 bridges and estimates total Phase 2 costs to be $1 billion. Caltrans estimates that with the exception of one or two bridges (with very complex design work), all Phase 2 projects will be completed by the end of 2005.

Figure 4

Highway Seismic Retrofit Program Scope and Progress

As of January 2001
(Dollars in Millions)

	Number of Bridges	
	Phase 1	**Phase 2**
Retrofit construction complete	1,039	1,126
Under contract for construction	—	10
Design not complete	—	19
Totals	**1,039**	**1,155**
Estimated construction cost	$800	$1,000
Construction complete target	2000	2005

Schedule Slips for Toll Bridge Retrofit. Caltrans is also retrofitting seven of the state's toll bridges for seismic safety at an estimated cost of $2.6 billion, as shown in Figure 5. Replacement of the east span of the Bay Bridge is the largest cost component, estimated at $1.3 billion. Caltrans

currently estimates this to be completed in fall 2005, delayed from an original schedule of winter 2004.

The delay is mainly due to the United States Navy's refusal to grant an encroachment permit to allow Caltrans to drill on Yerba Buena Island. Although Caltrans was ready to begin this work in fall 1998, the Navy did not issue the permit until September 1999, causing work to be delayed by one year.

Figure 5

Toll Bridge Seismic Retrofit Program

(Dollars in Millions)

Bridge	Completion Date		Estimated Cost
	Original	Revised	
San Francisco-Oakland Bay			
New east span	Winter, 2004	Fall, 2005	$1,289
West span	Fall, 2003	Spring, 2007	422
Subtotal			($1,711)
Benicia-Martinez	Summer, 1999	Summer, 2002	132
Carquinez—eastbound	Winter, 1999	Spring, 2001	88
Richmond-San Rafael	Fall, 2000	Spring, 2005	383
San Diego-Coronado	Fall, 1999	Fall, 2001	95
San Mateo-Hayward	Fall, 1999	Fall, 2000	156
Vincent Thomas	Winter, 1999	Spring, 2000	54
Total			**$2,619**

With respect to the west span of the Bay Bridge, which will be retrofitted rather than replaced, the department estimates that construction will be not be completed until spring 2007, *four* years later than originally planned. Additionally, Caltrans reports delays in completing the Benicia-Martinez, the Richmond-San Rafael, and the Carquinez Bridges. Despite repeated requests for an explanation for these delays, the department would not provide any response.

Although the department reports no net change above last year's total cost estimate, it reports substantial changes in the cost of specific bridges, including a $48 million *increase* in the cost of the Richmond-San Rafael Bridge, and a $6 million increase in the combined cost of the Benicia-Martinez, San Mateo-Hayward, and Vincent Thomas Bridges. However, the department reports that these cost increases are exactly offset by a

$54 million *decrease* in the estimated cost of repairing the Bay Bridge. At the time this analysis was prepared, however, the department had not provided any explanation for how these savings will be achieved.

Department Should Report at Hearings on Cost Estimates. Because completion of the seismic retrofit of the state's toll bridges has experienced significant delay, there is a risk that the cost of the work could be significantly higher than originally estimated. In order to ensure that the Legislature is kept informed with regard to the cost and schedule of this program, we recommend that the department report at budget hearings regarding the reasons for the revised schedules and the most recent cost estimates for the seismic retrofit of each toll bridge not yet completed.

Completing Environmental Documents on Schedule Still a Challenge

In 1999-00, Caltrans completed less than half of its scheduled State Transportation Improvement Program environmental documents; however, the department exceeded its goal for completing State Highway Operation and Protection Program environmental documents.

Less Than Half of Scheduled STIP Environmental Documents Completed in 1999-00. Our review of the number of STIP environmental documents completed for STIP projects last year underscores the challenge the department faces with respect to environmental review. Of 90 environmental documents that the department planned to complete during 1999-00 (including some that were originally scheduled for 1997-98 and 1998-99), only 40 were completed. The remaining 50 rolled forward to 2000-01 and beyond.

It is worth noting, however, that in 1998-99 the department completed only 10 of 36 environmental review documents that were scheduled for completion. In this context, the department's performance both in terms of the rate and the number of environmental documents completed is a substantial improvement over the previous year. According to the department, this greater level of output is due largely to increased staffing. The department states that it will continue to improve in this area as it benefits from the additional staff at the state and federal resource agencies dedicated to environmental review of transportation projects as described below.

Department Exceeded Goal for Completing Environmental Documents for SHOPP Projects. The department was much more successful at completing environmental documents in the SHOPP than in the STIP. Specifically, the department surpassed its goal by completing all SHOPP environmental documents that were scheduled for 1999-00 and advancing several from future years. The discrepancy between delivery of STIP

and SHOPP environmental documents is largely due to the fact that the type of environmental document required for a typical SHOPP project is much simpler than that required for a typical STIP project. This is because SHOPP projects normally do not require extensive environmental review as they typically have fewer environmental impacts.

What Is Caltrans Doing to Streamline Environmental Review? Beginning in 1999-00, Caltrans received funding for 19 positions at state and federal resource agencies to help expedite environmental review of Caltrans projects. As of January 2001, all but four of these positions were filled. While funding these positions was an important first step towards speeding up the environmental review process, there are additional opportunities for expediting environmental review (and project delivery in general) that the department has not yet pursued, as discussed below.

Department Should Respond to Recommendations on Project Delivery

A number of reports have made recommendations for improving the delivery of transportation projects. We recommend that the department report at budget hearings regarding actions it intends to take in 2001-02 to improve project delivery in general, and expedite environmental review of projects in particular.

Background. In our *Analysis of the 2000-01 Budget Bill*, we made a number of recommendations to expedite the delivery of transportation projects. Since the issuance of our 2000-01 *Analysis*, several reports required by AB 1012 have been completed which contain numerous recommendations for expediting project delivery. These include reports from four different Caltrans districts on project delivery in general, as well as a report on how to improve project delivery via better information management systems.

In addition, CTC recently made 29 recommendations for ways to accomplish environmental streamlining in its *2000 Annual Report to the Legislature*. The report recommends that the state adopt a more comprehensive approach to transportation project development, in which transportation and environmental agencies define and work towards common objectives, instead of their traditional adversarial approach. Specifically, CTC recommends that this new approach include the following elements:

- Joint planning to define joint transportation and environmental objectives, and projects to meet them.
- Intensified management attention at the senior level towards environmental streamlining.

- Open and clear communication and negotiation to seek common benefit, from the initial planning phase through environmental studies and project construction.
- Environmental agency agreement to cooperate and expedite project reviews and decisions.
- Pursuit of federal streamlining with the eventual goal of achieving an alternative National Environmental Policy Act (NEPA) rocess for California.

We recommend that the department report at budget hearings regarding actions it has taken to date and those it intends to take in 2001-02 to improve project delivery. The report should address, in particular, which of the recommendations regarding environmental streamlining made by various reports Caltrans intends to implement.

Project Delivery Will Partly Depend on Vacancies and Contracting Out

We recommend that the department report at budget hearings regarding current vacancies and actions it is taking to fill them. Additionally, we recommend the department report on how it intends to implement Proposition 35 which increased the state's flexibility with regard to contracting out design and engineering work.

Department Has Over 1,500 Vacancies. The extent to which Caltrans is able to meet its STIP, SHOPP, and TCRP project schedules partly depends on how fast it fills its vacancies. It also depends on the extent to which the department plans to contract out. Based on the most recent data available, we find that as of December 31, 2000, Caltrans had 1,561 vacancies, out of a total of 24,619 authorized positions. This translates into a 6.3 percent vacancy rate overall, with significant variation among the various programs.

Most Vacancies in Capital Outlay Support. The largest number of vacancies is in the capital outlay support program, which had a total of 862 vacancies, a 7.4 percent vacancy rate. Capital outlay support staff are responsible for design and engineering, as well as overseeing construction of highway projects. Thus, a high level of vacancies in these staff positions will likely delay the delivery of projects on the state highway system. According to Caltrans, the greatest number of vacancies are in the San Francisco Bay Area and the Los Angeles region where competition with the private sector is highest due to the high cost of living relative to other parts of the state.

The second largest number of vacancies is in the planning program, which had a total of 234 vacancies, a 20 percent vacancy rate. The planning program includes staff who work on project initiation documents

that are required before a project can be programmed in the STIP or the SHOPP. Accordingly, large vacancies in the planning program will likely slow down the progress of projects from the planning stage to the design and engineering stage.

Finally, the third largest number of vacancies is in the traffic operations program, which had a total of 194 vacancies, or 11 percent. These staff perform work related to congestion relief, such as staffing Transportation Management Centers (TMCs) which respond to traffic congestion in real time. This program also suffers from competition with the private sector as a lot of the positions are for electrical and civil engineers.

Contracting Out Policy Not Yet Determined. In November 2000, the voters approved Proposition 35 which increased the state's ability to contract out for design and engineering work. As of January 2001, the department had not yet determined the amount of work that would be performed in 2001-02 by state staff versus the amount that would be contracted out to the private sector. The department indicated, however, that with the passage of Proposition 35, local project sponsors could choose whether they wanted Caltrans or a private contractor to perform design and engineering work for projects on the state highway system.

Department Should Report at Hearings. In order to hold the department accountable for reducing its vacancies and to ensure that the department has adequate staff resources to deliver projects, the Legislature should require the department to report at budget hearings regarding its most recent vacancies, by program area and district, and actions it is taking to fill them. Additionally, the department should report on how much work it intends to contract out to the private sector versus how much will be performed by state staff for the current year, as well as the budget year. These estimates should identify how state staff and private contractors will be used to meet workload for the STIP, SHOPP, and TCRP.

Capital Outlay Support Request Will Be Amended

We withhold recommendation on $1.2 billion requested for capital outlay support staff because staffing needs will be revised during the May Revision when more accurate information on workload for the 2000 State Transportation Improvement Program and the Traffic Congestion Relief Program will be available.

Withhold Recommendation on Capital Outlay Support. The budget proposes $1.2 billion to fund capital outlay support, a 1.3 percent increase from the current-year's estimated expenditures. This increase is due to increased workload projected for the 2000 STIP and the TCRP. However, the department indicates that it will provide new estimates in the spring, as part of the May Revision, when more accurate estimates are available

regarding the amount of project development work that will be performed during 2001-02. Additionally, the department has not yet determined how much work it intends to contract out, as mentioned above. Pending receipt of new workload estimates and information regarding contracting out, we withhold recommendation on the department's capital outlay support request.

Legislative Oversight: Project Delivery Reports Not Submitted

We recommend that the Legislature require the department to report at hearings regarding the status of two project delivery reports that are overdue.

The *Supplemental Report of the 2000-01 Budget Act* requires that Caltrans report on two issues related to project delivery. The first, due December 1, 2000, requires Caltrans to report on the degree to which it has taken advantage of an agreement with the Federal Highway Administration designed to expedite environmental review. The second, due January 10, 2001, requires Caltrans to report on projects that would be good candidates for beginning right-of-way acquisition prior to final approval of the environmental document. To date, neither report has been submitted to the Legislature.

The department's failure to submit its reports in a timely manner is not a new development. In our *2000-01 Analysis*, we identified that four out of five required reports were overdue. These reports were eventually submitted, though many months overdue. Given the Legislature's interest in expediting project delivery, we recommend that the department report at budget hearings on the status of the two project delivery reports.

Legislative Oversight: Report on Training Program Overdue

We withhold recommendation on $11.3 million in ongoing funding for a training program pending the Legislature's receipt and review of a report on the program's progress and results to date.

Background. In May 2000, the department reported that over 50 percent of capital outlay support staff had less than three years of experience. During the May Revision of the *2000-01 Budget Bill*, the department requested funding for a training program for Caltrans engineers. Specifically, the program included approximately $11.3 million in ongoing expenditures, and $0.7 million in one-time expenditures. While the training program is designed to focus on new staff, it provides training for more experienced staff as well. The Legislature approved the program, but required in the *Supplemental Report of the 2000-01 Budget Act* that the

department submit a preliminary report on the progress of the program by January 5, 2001, followed by a final report on September 1, 2001.

At the time this analysis was prepared, the department had not submitted the preliminary report on the program. As a result, the Legislature is not able to assess the merits of the program when considering whether or not continued funding is warranted in 2001-02. While we recognize the value and need for training at Caltrans, we believe that funding should not be continued without some type of review of the program's performance to date. Accordingly, we withhold recommendation on $11.3 million in Item 2660-001-0042 pending receipt and review of the required report.

TRAFFIC OPERATIONS

Electronic Toll Collection Not Yet Fully Tested

We find that Caltrans has not yet fully tested and validated the accuracy of the computer software system used to electronically collect tolls on the state's toll bridges. In order to ensure the accuracy of the final deployment of this system, we recommend that the Legislature require the department to report at budget hearings regarding the proposed plan to test and implement the system and the risks of the system not functioning as intended.

Background. In 1990, the Legislature enacted Chapter 1080 (SB 53, Kopp) to require that Caltrans develop specifications for an electronic toll collection (ETC) system to be deployed on the state's toll bridges. Caltrans developed these specifications and in 1996 completed a feasibility study report to develop the Automated Toll Collection and Accounting System (ATCAS).

At that time, the department estimated that the system would be fully deployed on all of the San Francisco Bay Area's bridges by 1997. However, the project has been delayed by more than three years for a variety of reasons. Among these are contract disputes between Caltrans and the vendor regarding software requirements sought by the department which the vendor viewed as outside the scope of the original contract. These disputes have since been resolved through a settlement in which Caltrans commits to providing the contractor with an additional $13.6 million above the original $35.9 million contract amount.

Carquinez Bridge Pilot Repeatedly Failed Initial Test. The original ATCAS contract required that the contractor test the full system (including the electronic toll collection, accounting, and customer service center software) on the Carquinez Bridge before statewide deployment on the remaining bridges. Testing of the system, which required the contractor

to demonstrate 30 days of error-free operation, was initiated in 1996, but failed. Testing was conducted again in 1997 and twice in 1998, and while progress was made, the system nevertheless failed each time. As a result, Caltrans declined to authorize the contractor to proceed with installation on additional bridges until all deficiencies were corrected.

Caltrans Expedited Deployment Schedule. In July 2000, the Golden Gate Bridge—operated independently from Caltrans—became the first bridge in the state to implement an ETC system. The Golden Gate system was designed and deployed in less than two years. Although the system was created by a different vendor, state law requires that all electronic toll collection systems be interoperable, so that drivers can use the same device regardless of where they are driving.

In view of the Golden Gate Bridge's successful deployment and Caltrans' goal of providing the public with a fully operating system on *all* bridges, Caltrans accelerated its own project schedule. In July 2000, despite the fact that the Carquinez Bridge had not passed the Phase 1 Acceptance Test, Caltrans amended the contract to allow partial deployment on other bridges. Specifically, the department committed to deploy ETC on at least one lane on each of the San Francisco Bay Area toll bridges by the end of 2000. Caltrans met this ambitious schedule though not without some glitches along the way.

System Not Yet Fully Tested on Remaining Bridges. While the system is now in operation on all Bay Area toll bridges, the contractor has not yet fully certified the accuracy of the ATCAS system. For example, while all of the bridges have the ATCAS hardware and software installed on at least one lane, the accuracy of the accounting portion of the software or the violation detection system has not yet been tested on these bridges. As such, problems may exist at each of the bridges that have not yet been identified or corrected. For instance, the department was forced to temporarily shut down the system on the Bay Bridge in mid-January when it noticed major problems with the violation detection system. Rather than shut the lane down during the commute hour, causing major congestion, the department allowed cars to go through the lane for free.

We are concerned that the department's expedited schedule may cause it to overlook problems that should be identified and corrected on each of the bridges before further installation. Based on our discussions with Caltrans, we understand that instead of first testing for and fixing problems on *all* bridges before further deployment, the department intends to return to the Carquinez Bridge for final Phase 1 Acceptance Testing some time in February or early March 2001. If this test is successful, Caltrans intends to authorize the contractor to deploy the system onto *every* lane on *every* bridge.

We find that it would be more prudent to identify and correct existing problems on *all* bridges prior to beginning this final test which precedes full installation. Otherwise, there is a risk that although the system may pass the test at Carquinez, it will encounter problems on the other bridges that could be avoided.

The ATCAS system has been plagued with a variety of problems, from inaccuracies in the accounting software to problems with the violation detection system. In order to ensure that the risks of the project are minimized, we recommend that the department report at budget hearings regarding the proposed testing and implementation plan for the completion of the project. In its report, the department should indicate exactly what these risks are and how the department intends to minimize them.

More Oversight Needed for Transportation Management Centers

We find that statewide direction and coordination for Transportation Management Centers (TMCs) are lacking. Accordingly, we recommend budget bill language to require Caltrans to update its TMC Master Plan. We also find that there is a lack of oversight by Caltrans with respect to TMC performance. To address this problem, we recommend the enactment of legislation to require Caltrans to report annually to the California Transportation Commission (CTC) on TMC performance, with the CTC providing a summary of this information in its annual report to the Legislature.

Background. Over the last 30 years, Caltrans has spent at least $488 million in the development of TMCs and their related field infrastructure (see Figure 6, next page). The goal of TMCs is to improve traffic flow by responding to highway traffic conditions on a real-time basis. Located in the most congested areas of the state, there are now TMCs in eight Caltrans districts: Fresno, Los Angeles, Orange County, Sacramento, San Bernardino, San Diego, the San Francisco Bay Area, and Stockton.

Managed in partnership with the California Highway Patrol (CHP) and regional transportation planning agencies (RTPAs), TMCs receive real-time traffic information using loop detectors, video cameras, and the computer aided dispatch system. In addition, TMCs use local equipment, such as changeable message signs and ramp meters to better manage traffic congestion. The TMCs also serve as the communication hub for dispatching CHP traffic officers and coordinating the Freeway Service Patrol (FSP) tow truck service which assists and removes disabled vehicles in order to reduce congestion caused by traffic incidents.

Lack of Statewide Goals and Responsibilities for TMCs. Based on our review, we find that Caltrans has made a substantial investment in

TMCs and traffic operations in general. However, the department has not provided adequate guidance and oversight towards achieving the goals of using TMCs to optimize freeway capacity and reduce congestion. The only statewide document to guide TMC operations is the TMC Master Plan, written in 1997. It is highly general in nature and lacks a clear framework to guide the management of TMCs. For instance, instead of providing measurable goals with respect to congestion relief, the Master Plan states that the goal of TMCs is to "see the future potential and provide better service." Another Caltrans document, the *Ten-Year State Highway Operation and Protection Program*, states that there are no measurable objectives defined for TMC improvements.

Figure 6

Traffic Management Infrastructure and Expenditures

1972 Through 2000
(Dollars in Millions)

Type of Infrastructure	Number of Units	Cost
Transportation management centers	8.0	$33.3
Closed circuit television cameras	568.0	28.3
Changeable message signs	461.0	74.0
Highway radio programs	98.0	9.4
Ramp meter locations	1,841.0	166.9
Loop detector stations	3,195.0	123.3
Weather information systems	68.0	3.1
Fiber optics (miles)	181.9	49.4
Total	**—**	**$487.7**

Additionally, the TMC Master Plan contains no clear definition of the roles and responsibilities of Caltrans, CHP, or RTPAs. For example, under the definition of roles, the document states that Caltrans is responsible for "system management for incident response" whereas CHP is responsible for "state highway incident management." As a result of the lack of clear guidance with regard to TMC management and operations, TMCs operate independently, each setting up their own business protocols. For example, we found substantial variation across TMCs in the role that CHP and Caltrans play in operating the FSP program, with CHP managing the program almost entirely in some areas, while much less so in others.

The need for better management of TMCs is reflected in a recent action taken by the RTPA in the San Francisco Bay Area—the Metropolitan

Transportation Commission (MTC). The commission hired a consultant to work with MTC, Caltrans, and CHP to articulate the goals and objectives for optimal freeway operations and the responsibilities and resources needed to achieve them. According to the request for proposal to hire the consultant, neither CHP nor Caltrans currently has a clear written statement of objectives relative to their responsibilities at TMCs. As a result, MTC has found it necessary for the region to define these responsibilities more clearly. While there may be a need for each region to develop its own set of guidelines for TMC operations and traffic management in general, Caltrans and CHP should develop a set of statewide guidelines to ensure statewide consistency across TMCs and provide clear goals and objectives that can be measured over time.

No Consistent Methodology for Determining Staffing Level at TMCs. Based on our review, we also found a lack of a consistent methodology for determining the necessary staffing level for TMCs. For example, a recent report, commissioned by the San Francisco Bay Area District 4 and MTC, found that staffing levels at the District 4 TMC area are below what is necessary to effectively operate and maintain the current TMC and related traffic management infrastructure. The analysis found that while the traffic management infrastructure has grown significantly with more expansion planned, the number of dedicated personnel has not kept pace. Using a variety of methods by which to assess workload needs, the report concluded that the current staffing level in District 4 is inadequate to deal with existing workload, as well as planned growth.

Recommend TMC Master Plan Be Updated. In order to bring greater coordination, consistency, and oversight to TMC operations, we recommend the Legislature require that Caltrans, in coordination with CHP, update its TMC master plan by adopting the following budget bill language in Item 2660-001-0042:

> By July 1, 2002, the Department of Transportation (Caltrans), in coordination with the California Highway Patrol (CHP), shall submit to the Legislature an update of its Transportation Management Center (TMC) Master Plan which shall include, but not be limited to: (1) a specific definition of the roles and responsibilities of Caltrans and CHP in the areas of incident management and recurrent congestion; (2) measurable goals related to incident clearance, ramp meters, and changeable message signs; (3) a management structure that will ensure statewide consistency and coordination of TMC activities; and (4) an estimate of annual funding needs for 2002-03 through 2006-07 for each TMC, including the cost of operation and maintenance, staffing, and new technology. The estimate of these funding needs shall be based on a clearly defined and consistent methodology throughout the state.

The TMC Performance Should Be Measured. Because Caltrans has not specified measurable goals for TMCs, the department does not currently measure their benefits in terms of congestion relief. Instead, Caltrans measures the performance of TMCs based on inputs, such as the "number of centerline miles covered" by the traffic management infrastructure (for example, loop detectors and changeable message signs). Caltrans asserts that this type of infrastructure has a high benefit-cost ratio, but provides no supporting documentation related to specific projects based on actual data. As a result, despite having spent at least $488 million on traffic management infrastructure, with another $368 million programmed for installation over the next four years, the department cannot readily provide concrete evidence of TMCs' benefits. This makes it difficult to justify investment in this area and hampers both Caltrans' and external stakeholders' ability to evaluate and compare the benefits of traffic system management projects with those of other transportation improvements.

Recommend Department Report to Legislature on Performance of TMCs. Caltrans' 2001-02 budget recognizes the need for more accountability in this program by providing a $1.7 million increase to the operations program to develop a methodology for evaluating traffic management benefits. In view of this budget augmentation, we recommend the enactment of legislation that requires Caltrans, in coordination with CHP, report annually to CTC on TMC performance. The report should include, but not be limited to the following: (1) the number of incidents responded to at each TMC; (2) average incident clearance time for each TMC, using a consistent definition of "incident clearance time;" (3) annual estimate of travel time savings due to use of ramp meters by TMC; (4) annual estimate of travel time savings due to the Freeway Service Patrol program for each area where the program operates; (5) discussion of the use and benefits of changeable message signs at each TMC; and (6) an update of the total transportation management inventory by district, including the number of ramp meter locations, CCTVs, changeable message signs, and loop detectors. The legislation should also require that CTC include a summary of this information in its annual report to the Legislature.

Caltrans Needs to Better Maintain Traffic Management Infrastructure

We recommend that the department report at budget hearings on the estimated cost and schedule of repairing the state's traffic management infrastructure.

Based on our review, we found that the traffic management infrastructure, including loop detectors and CCTVs, is in disrepair in certain parts of the state. For example, in the San Francisco Bay Area, an aggressive loop installation schedule combined with inadequate electrical engi-

neering staff caused many loops to be installed incorrectly or damaged during other construction activities. As a result, most of the loop detectors and CCTVs in the district are not currently functioning.

According to preliminary estimates by Caltrans, $7.6 million is needed to repair them. This infrastructure forms the backbone of the district's traffic system management program, without which TMCs and the software they depend upon cannot operate. Despite the importance of repairing this infrastructure, there is currently no funding commitment from Caltrans to do so. Current law, however, requires that Caltrans first *maintain* its infrastructure prior to *expanding* it. Accordingly, we recommend that the department report at budget hearings on the estimated cost of repairing this infrastructure statewide and the department's schedule for making such repairs.

INFORMATION TECHNOLOGY AT CALTRANS: AN ASSESSMENT

The Importance of Information Technology (IT) at Caltrans. Like any modern organization, Caltrans relies upon IT for many of its core business functions. Caltrans' IT systems range from a departmentwide electronic mail system to engineering software, such as computer-aided drawing and design. Caltrans currently has over 100 software applications in operation and 18 more under development. Figure 7 (see next page) provides a summary of the five major applications currently underway.

As can be seen from Figure 7, Caltrans' IT systems include projects designed to improve its internal operations, such as an automated system to calculate payroll and employee leave, as well as projects that provide direct benefits to the public, such as the automated transportation permits project.

Caltrans' ability to successfully initiate, manage, and deploy IT systems is critical to many of the Legislature's and the administration's top transportation priorities, including speeding up project delivery and providing congestion relief. With respect to project delivery, IT systems are an important factor in how long it takes to complete a transportation project. This is because the multiple phases of a project, from planning to construction, each require tracking and timely exchange of information with both internal and external parties.

Assembly Bill 1012 (Torlakson) recognizes the important role of IT in speeding up project delivery and requires the formation of an advisory committee to recommend improvements to the department's management information systems. (The committee issued its draft report, containing ten recommendations, in December 2000.) With respect to con-

gestion relief, the department has developed several IT projects that are intended to provide *direct* benefits to motorists, such as electronic toll collection and an advanced traffic management system (ATMS).

Figure 7

Major Caltrans IT Projects in Development

(Dollars in Millions)

Project	Description	Cost	Program	Year Due
Automated Toll Collection and Accounting System	Automates collection of tolls on state toll bridges and accounting for revenue collection.	$76.6	Traffic operations	2000/ 2001
Transportation Operations Project System	Calculates payroll and employee leave.	$19.0	Statewide	2002
Integrated Maintenance Management System	Provides an integrated system to plan, budget, schedule, report, evaluate, and manage use of labor, equipment, and materials.	$9.3	Maintenance	2002
Project Resources and Schedule Management	Provides a scheduling tool for capital project managers and identifies staff time against a workload model.	$11.5	Capital outlay	2002
Transportation Permits	Provides Internet access and automated system for permit applications for oversized loads.	$15.0	Traffic operations	2002

Analyst's Approach. In the following sections, we highlight the challenges facing Caltrans in the area of IT and recommend steps that should be taken for improvement. In conducting our review, we examined the organizational and fiscal structure of IT at Caltrans. We also reviewed in depth two IT projects, the Wide Area Network (WAN) Infrastructure project and ATMS. These projects were chosen because they provided an opportunity to review a departmentwide IT system, in the case of WAN,

and the department's most significant traffic management system, in the case of ATMS.

Based on our review, we find that there are significant problems with the way IT is currently organized and implemented at Caltrans. The first section of this discussion reviews broad organizational problems and recommends options for addressing them. The following sections discuss WAN and ATMS in particular. The review of these projects helps to provide specific examples of the problems that can result from the lack of organization and strategy with respect to IT. The final sections provide recommendations related to the oversight of IT by control agencies and the need for a departmentwide strategy for the development and use of traffic information systems.

Department's IT Strategic Plan Needs Updating

We recommend the adoption of budget bill language requiring the department to conduct an information technology needs assessment of its core programs and update its Agency Information Management Strategy according to the priorities established in the assessment.

Department Should Conduct IT Needs Assessment. Every state department is required to have an IT strategic plan, known as an Agency Information Management Strategy (AIMS) to guide IT in the department. The purpose of the AIMS is to ensure that departments have a clear strategic direction with respect to IT, including the identification of priority projects.

Caltrans' current AIMS is based on a needs assessment conducted in 1995. While that was only six years ago, the current AIMS is outdated because IT needs and goals of the various programs have changed over that time. For example, the current AIMS does not address the subject of traffic operations even though the traffic operations program oversees the development of state-of-the-art software technology related to traffic management. This occurred because traffic operations systems, such as ATMS, were previously exempt from review as IT projects by control agencies. Because this exemption from control agency review was removed in August 1999 (discussed in a later section), it is appropriate for the department to update its AIMS to incorporate software related to traffic operations.

Since the last update of AIMS, the needs and goals of the department's programs have changed. Accordingly, we recommend that the department conduct a substantive update of its AIMS. In preparation for this, the department should first conduct an IT needs assessment (and, where necessary, business process review) of its five core programs: finance, policy and administration, project development, planning, and mainte-

nance and operations. To achieve this, we recommend the adoption of the following budget bill language in Item 2660-001-0042:

> By November 1, 2001, the Department of Transportation shall complete a needs assessment of its five core programs (finance, policy and administration, project development, planning, and maintenance and operations) with respect to information technology. The needs assessment shall identify for each program the business problem or goal that the system would address, with an emphasis on measurable objectives. Additionally, by March 1, 2002, the department shall complete an update of its Agency Information Management Strategy.

Caltrans' Information Technology Needs Reorganization

We identify numerous problems with the way information technology (IT) is currently organized at Caltrans. We recommend budget bill language requiring the department to include all its districts in its Information Technology Management Committee. We further recommend the adoption of budget bill language directing Caltrans to submit to the Legislature by March 1, 2002, an IT reorganization plan.

Caltrans IT Environment Lacks Standardization. Caltrans is organized into 12 geographic districts, 6 service centers, and 8 programs with headquarters located in Sacramento. As the importance of IT has grown over the last decade, each Caltrans district and program has devised unique ways to meet its own IT needs. This has resulted in a highly decentralized and fragmented IT environment which lacks standardization. For example, multiple local area networks (LANs) that allow for internal file sharing exist in the same location. Additionally, duplicate or incompatible systems have been developed by different Caltrans districts or different programs to perform the *same* function. For example, individual Caltrans districts have purchased different types of hand-held computer devices and multiple systems have been proposed for tracking employee time.

This lack of IT standardization makes it difficult to establish and enforce departmentwide standards, which have been developed by the Information Systems and Service Center (ISSC), the department's central IT division. It also reduces the economies of scale that could be realized by deploying departmentwide software because costly modifications may be required to adapt the software to each new environment.

Staff for IT Fragmented Throughout Department. In terms of personnel, the department has approximately 720 IT staff. About 38 percent of these staff work in ISSC located in Sacramento. The ISSC's responsibilities cover a wide spectrum, ranging from support of personal computers to the development and implementation of the department's IT policies

and standards. The remaining 62 percent of IT staff are not directly responsible to ISSC. Specifically, about 39 percent of the IT staff work in the 12 district IT offices and report to the district manager for administration. These IT district staff are responsible for LANs, help desk operations, as well assisting program staff with proposed IT applications and implementing statewide standards (functions also performed by ISSC). Another 23 percent of IT staff work in various transportation programs, such as maintenance or planning, and report to the respective program manager. They perform similar work to the district IT staff but work exclusively for individual programs.

In addition to staff with *official* IT classifications, an unknown number of staff with non-IT classifications perform IT functions within the department. For instance, the new technology and research program has staff working on communication systems engineering and the traffic operations program has staff working on developing standards for the intelligent transportation system. This decentralized IT structure creates a number of problems, including:

- Duplication of staff effort due to the lack of definition of exactly who (IT staff within a program, IT district staff, or ISSC) is responsible for implementing standards and providing service to the programs.
- Lack of standardization of IT software and hardware due to decentralized development of IT projects.
- Duplicate efforts to achieve the same goals (for example, multiple systems to collect data on employee time expenditure).
- Lack of economy of scale due to the development of customized software instead of departmentwide systems.
- Lack of coordination and communication among IT staff.
- Poor customer service to the department's individual programs.

Broader Participation Needed in New IT Review Committee. In January 2000, the department formed the Information Technology Management Committee (ITMC) to bring more cohesion and executive oversight to IT development. The specific goals of ITMC are to: (1) ensure adequate funding for the current functions performed by ISSC, (2) establish a departmentwide baseline of IT products and services, and (3) to review and prioritize proposed IT application development projects. While this effort represents a move in the right direction, we are concerned that it is being developed without adequate participation by the districts. Specifically, ITMC membership includes only three (of 12) district directors, leaving nine districts entirely unrepresented. Given the goal of ITMC to serve

as an oversight body for statewide coordination and development of IT, it is important that the membership of ITMC be representative of all of the Caltrans districts. Accordingly, we recommend adoption of the following budget bill language in Item 2660-001-0042:

> The Department of Transportation (Caltrans) shall include all district directors or district information technology division representatives in the Information Technology Management Committee to ensure consistency across the department and the representation of all Caltrans districts.

New Project Management and Coordination Efforts Likely Insufficient. Caltrans is also creating a Project Management Office (PMO) in ISSC to help bring better management and consistency to IT development. The PMO includes a Project Initiation Unit (PIU) to provide support to the programs in order to comply with reporting requirements of the Department of Information Technology (DOIT) and the Department of Finance (DOF), the two state agencies which review IT projects. Specifically, PIU will provide instruction on how to prepare project initiation documents, known as feasibility study reports (FSRs), which are required prior to Caltrans' initiating any IT project above $500,000.

While additional assistance in the areas of project management and project initiation may be needed, it is unclear whether ISSC has sufficient expertise or resources to meet the changing and diverse needs of the programs. In our interviews with district staff, they have expressed concern about ISSC's ability to deliver quality customer service, such as assistance with project initiation or problems with departmentwide software. This is partly due to the fact that, historically, ISSC has placed a higher priority on *control* than on service. For instance, in order to provide information to DOIT, ISSC recently required all districts to use an electronic auditing software which resulted in shutting down one districts's entire computer network for two days. With respect to customer service, ISSC does not always notify the programs or the districts in advance (or at the conclusion) of work on the network that may affect them. Finally, when the programs seek guidance from ISSC, they often receive different responses from different staff within the organization.

Lack of Control Over IT Funds Delays Projects. In addition to these organizational problems, we found that a major barrier to efficient and effective IT implementation is the way in which funding for IT is currently organized. Specifically, Caltrans has no separate IT program or budget. Instead, funds for specific IT projects are provided by the programs that will benefit from the system. As a result, the programs have control over the funds for IT projects and can refuse to release money for a specific project, even after the project has been approved by the control agencies and funds have been appropriated by the Legislature. Since IT

may not be the top priority of a program, substantial time can be spent negotiating for funds, resulting in delays to project implementation. For example, the Transportation Operations and Project Support System project, a system to track staff costs and time expenditures, has been delayed for at least a year due to negotiations with the programs on the level of funds they will allocate to the project.

Funding for IT Support Unreliable. In addition to the lack of centralized control over funds for IT *projects*, there is also no centralized control over IT *support* funding. This causes problems for both the district IT staff, as well as ISSC. Currently, IT is funded as part of the overall administration budget. District IT offices receive an amount of funds from the district's administration budget, but this amount often falls short of funding the service level they are expected to deliver. This is because the current practices for estimating and budgeting for IT support costs are inadequate. As a result, district IT offices find that they lack adequate resources and have to request funds from the various programs in order to provide support for new hardware and software. Additionally, when the programs are dissatisfied with the level of service they are receiving some choose to fund their *own* IT staff positions, rather than provide funds to the district IT division. This leads to further fragmentation and inefficient delivery of IT services at the district level.

A similar situation occurs between ISSC and the programs at Caltrans headquarters. In this case, ISSC often finds that the IT expenditures it must fund on behalf of the programs, such as the use of the WAN, exceed its budget. As a result, ISSC also finds itself requesting more funding from the programs. This reliance upon the programs for funding makes it difficult for district IT offices and ISSC to implement departmental and statewide IT standards, provide a consistent level of service, and plan for additional services and projects to facilitate the department's overall program activities.

Recommend Caltrans Develop IT Reorganization Plan. Overall, we find that the current efforts underway to improve IT at Caltrans do not adequately address the underlying organizational and fiscal problems facing the department. In order to ensure quality IT systems and service, adherence to departmental policies and standards, and efficient use of state funds, we recommend that Caltrans, with the assistance of a consultant, design an IT reorganization plan. To ensure that the reorganization plan is focused on providing service to the transportation programs, the department should survey the core programs regarding their needs and expectations related to IT services, systems, and management. To ensure broad participation by all of those currently involved in IT within Caltrans, the department should form a steering committee comprised of ITMC and all district IT managers to help develop and review the plan.

To accomplish this goal, we recommend the following budget bill language in Item 2660-001-0042:

> The Department of Transportation shall develop a reorganization plan for information technology (IT). Up to $250,000 appropriated in this item shall be available for the department to contract with a consultant in order to develop the plan. The plan shall be completed and submitted to the Chair of the Joint Legislative Budget Committee and the chair of the fiscal committee in each house no later than March 1, 2002. At a minimum, the plan shall accomplish the following goals:
>
> (a) Remove the IT budget from the administration program to create a fully funded and independent IT program.
>
> (b) Merge all IT staff and units into a single IT organization.
>
> (c) Restrict hiring of IT staff to the IT program.
>
> (d) Determine which IT roles and responsibilities should be controlled and performed centrally and which should be delegated to the districts or some type of regional IT branch.

Network Infrastructure Project: Benefits Fall Short

We find that the Wide Area Network (WAN) project is providing far fewer benefits than were originally estimated in the feasibility study report. We also find that there is significant opportunity for greater benefits to be realized to the extent that current manual processes are automated and utilize WAN.

Background. The WAN Infrastructure Project was initiated in 1997 to facilitate electronic data sharing and communication between Caltrans staff statewide as well as external agencies. We selected this project (hereafter referred to as WAN) for review because it represented the department's first major departmentwide system, had a relatively high cost of $85 million, and was initially criticized by the state's IT control agencies, DOIT and DOF. The concerns expressed by these agencies centered around the lack of a clearly defined business justification for the project.

Our review focused on whether the project has succeeded in achieving the original goals set forth in the project's FSR which provided the justification for the project. We found that although the project has achieved some of its original goals, many of the major benefits that were described in the FSR have not been obtained.

Some Benefits Have Been Achieved. Many of the objectives of the project have been realized, according to the Post Implementation Evaluation Report (PIER), which Caltrans submitted to DOIT, DOF, and the Legislature subsequent to this project's implementation. For instance, staff

at every Caltrans business location (including 395 remote sites) can communicate with each other through one, compatible E-mail system. Because the network provides a large bandwidth, engineers can now send very large data files electronically, rather than having to actually visit a specific location in order to review plans or designs. Additionally, data can now be backed up centrally, on a regular cycle without disrupting users. All of these benefits can be expected to translate into increased productivity.

Other Proposed Benefits Not Delivered. However, our review shows that the PIER overstates the benefits of the project and ignores many areas in which the project has fallen short of expectations. For instance, the project was originally promoted as a solution to problems identified in a 1994 consulting report. Among the problems identified were the proliferation of databases containing duplicative and often inconsistent information. One of the rationales advanced on behalf of WAN was that it would enable the department to integrate all of these systems into one uniform system. Our review of recent efforts to improve Caltrans' management information systems suggests, however, that the proliferation of multiple databases is still a significant problem. According to the AB 1012 advisory committee, project delivery information is currently contained in *four* different systems each of which must be modified when changes are made to a project. The WAN may allow for the *exchange* of information, but, by itself, has done nothing to consolidate multiple, duplicate systems.

The WAN Is Underutilized. As with any type of infrastructure project, the benefits of WAN depend upon how much the system is used. While ISSC reports that the department is currently utilizing almost 100 percent of the leased bandwidth, most of the projects that the FSR stated as benefitting from WAN have not been implemented. Specifically, of 25 automation projects that were referenced in the FSR, including a project to develop a single project identifier for capital projects, only 6 have been completed. Thus, there may be ample opportunity for the automation of business processes that will subsequently utilize the network. To the extent that newly automated business practices depend on WAN, its benefits will increase. Requiring the department to conduct an IT needs assessment of every program, as recommended in an earlier discussion, will help the department identify and prioritize new IT systems that can take advantage of WAN.

Travel Time Savings Exaggerated. The FSR also overstated the benefits that WAN would provide to the public in terms of travel time savings resulting from faster incident clearance. In response to criticism that the original FSR did not demonstrate a strong business case or contain measurable objectives, Caltrans modified the FSR to include an estimate of $779 million (or an

average of $129 million annually over six years) in benefits. These savings were based on estimated travel time savings for the public as a result of enhanced traffic management brought about by linking TMCs to WAN. According to the PIER, benefits of this scale were not realized and Caltrans has now reduced its estimate to $57 million annually over six years. Even so, our review found that it is not clear that the methodology used to determine this estimate is based on any reliable data or analysis.

The IT Projects Should Be Approved Based on Measurable Benefits. In summary, we find that WAN is providing far fewer benefits than were originally estimated in the FSR. This is in part because the project was largely justified based on projected travel time savings benefits that were based on unrealistic and undocumented assumptions. While travel time savings may be a key benefit that deserves to be mentioned in future FSRs, the Legislature and control agencies should require the department to provide solid evidence that a specific project is likely to result in such benefits.

Opportunities for More Benefits in the Future. Despite these shortcomings, we also find that there is a significant opportunity for further benefits to be realized. While WAN was begun four years ago, few of the automation projects that were expected to take advantage of it have been implemented. To the extent that the department prioritizes the automation of business processes that are currently being performed manually, WAN will play an essential role in enabling their implementation.

Advanced Traffic Management System: Development Lacked Coordination

Rather than developing a uniform software system for traffic management, individual Caltrans districts developed their own unique systems. This has delayed deployment of a statewide Advanced Traffic Management System and resulted in significant discrepancies between the operational capabilities of the systems in different parts of the state.

Background. The ATMS project is an integral part of the department's effort to reduce traffic congestion through the application of IT. The purpose of the ATMS system is to integrate the functions performed at a TMC so that staff can both *access* traffic information and *control* hardware, such as changeable message signs and ramp meters, from the same computer workstation. By integrating these functions, ATMS should reduce the length of time it takes to clear incidents, thereby reducing the congestion they cause. Caltrans estimates that approximately *half* of all highway congestion is caused by traffic incidents. Unlike recurrent congestion which is caused by too many vehicles crowding freeways, a substantial portion of the delay caused by traffic incidents can be eliminated by clearing accidents faster.

The ATMS First Developed for Los Angeles District. The ATMS project, consisting of multiple contracts and amendments, was initiated in 1991 by Caltrans District 7 in Los Angeles. The original contract for $6.9 million included the development of a report to define the goals and objectives of an upgraded TMC, as well as the development and installation of software that would be necessary to meet those goals. A second contract, awarded in 1993 for $4.5 million, added several new components, including the integration of CCTVs into the software and a long-term maintenance plan for the hardware. The ATMS software was originally scheduled to be completed by 1996, however, due to the relocation of the center and Y2K issues, the project was not installed and operational until late 1998.

Similar Systems Deployed, Then Decommissioned for Y2K Concerns. In 1993, subsequent to the initial development of ATMS at the Los Angeles TMC, another version of the technology was also being designed, tested, and deployed at the Orange County, San Bernardino, and San Diego TMCs. However, the system was less reliable and had fewer capabilities than the system being designed for Los Angeles and was not Y2K compliant. This system was decommissioned in December 1999.

Caltrans Owns Software, But Required to Prepare FSR for Statewide Deployment. Subsequently, Orange County contracted for a limited version of the Los Angeles ATMS. Caltrans also deployed the same limited version in the Sacramento, San Bernardino, and San Diego TMCs. Because ATMS has now been fully installed in Los Angeles, the department now owns the full software. However, DOIT is not allowing Caltrans to proceed with full installation in any other district without an FSR.

The ATMS Not Deployed in San Francisco Bay Area. The TMC in the heavily congested San Francisco Bay Area is not using *any* version of ATMS. Rather, it is using a scaled down version of its own customized system, known as the Interim Freeway Surveillance System (IFSS). According to staff of both Caltrans and MTC, IFSS is quite limited, with fewer capabilities than the ATMS software.

Migration to ATMS in the Bay Area Will Be Slower Than Elsewhere. In 1998, Caltrans issued a statewide TMC standardization plan. This plan envisions all TMCs eventually utilizing the same ATMS system. However, because the Bay Area TMC has developed its own unique set of hardware and software for traffic operations, its migration to ATMS is much more time-consuming and costly than at other TMCs.

To accomplish this migration, Caltrans has funded the development of another $2.5 million interim software system, to provide basic traffic and incident management functions. Also, Caltrans has funded a $9.3 million project in SHOPP to provide database integration and infrastructure

to prepare for ATMS installation. This project is not scheduled for completion until 2004.

Summary. We conclude that there was a lack of an initial statewide strategy to coordinate the development of ATMS software among the various TMCs. This led to the creation of a unique software and hardware system for both Los Angeles and the Bay Area, with very different capabilities. Because of this decentralized development, the department was unable to provide us with an estimate of the total amount invested in ATMS to date. With additional software and installation required for the statewide version of ATMS, a statewide system will likely not be installed until at least 2004.

Clear Definition of IT Needed

We recommend the adoption of budget bill language to require the Department of Information Technology, in conjunction with the Department of Finance, to provide the Department of Transportation with a clear definition of what constitutes an information technology project as it relates to traffic management.

The IT Exemption for Traffic Management Projects Revoked. Under current law, DOIT and DOF are responsible for reviewing and approving all IT projects that meet specific reporting requirements. For example, projects under $500,000 can be approved by the Caltrans director whereas projects over $500,000 must be approved by DOIT and DOF.

In general, projects that are considered to be "single function process control systems" are exempt from review by DOIT and DOF. For example, a system to control traffic signals would typically be exempt. With respect to Caltrans, this classification had been used to exempt projects in the area of traffic management, including ATMS. In August 1999, however, DOIT rescinded *all* exemptions for automated systems at Caltrans due to Y2K concerns and the discovery of a proliferation of IT systems that had been developed under this category.

Since the revocation of the exemption, the definition of what constitutes an IT project and, thus, requires an FSR, has become unclear. The department has been in extensive discussions with both DOIT and DOF, but the agencies have not issued any guidelines. In order to increase their oversight of traffic management investment, the control agencies are considering classifying much of it as IT, including CCTVs and technology that controls ramp meters.

Too Much Oversight Has Costs for Delivery. Based on our review, we concur that there is a need for greater oversight and coordination in the area of traffic management. However, we caution against requiring that

all projects be subject to control agency review and FSR requirements. This is because much of the traffic management technology used by Caltrans, such as loop detectors, changeable message signs, and CCTVs, is proven technology and is part of the foundation upon which ATMS are based. Requiring that additional investment in such infrastructure be subject to FSR requirements will delay implementation of projects in which the state has already made a sizable investment. For example, while $9 million worth of fiber optics has been installed in San Diego County, DOIT is not allowing Caltrans to proceed with the portion of the project that would provide system integration. As a result, the fiber optics that have been installed to date are currently providing no benefit whatsoever.

Instead of subjecting these types of projects to IT requirements on a case-by-case basis, we find that a better approach may be a programmatic FSR which would allow the department to justify its investment in a certain type of technology one time, rather than on a case-by-case basis. Additionally, we find accountability could be achieved by requiring the department to report on the use and impact of traffic management infrastructure on an annual basis, as recommended in our discussion on TMCs. Such a report will enable the administration and the Legislature to review the costs and benefits of such projects and thereby make better decisions about future investments.

Analyst's Recommendation. Most importantly, DOIT and DOF need to issue clear, consistent guidelines and definitions for what constitutes IT and how Caltrans should proceed with its traffic management program to be in compliance. Currently, certain traffic management projects, such as the fiber optics project described above, are subject to FSR requirements, while others are allowed to proceed. As a result, some project managers are taking the approach that they will proceed with a project until told otherwise, while others are devising ways to design projects so that they avoid control agency review. In order to provide the department with certainty so that it can comply with DOIT guidelines and deploy its traffic management system in the most timely and cost-effective manner, we recommend adoption of the following budget bill language in Item 0505-001-0001:

> By July 31, 2001, the Department of Information Technology, in coordination with the Technology Investment Review Unit of the Department of Finance, shall provide the Department of Transportation, the Chair of the Joint Legislative Budget Committee, and the chair of the fiscal committee in each house with guidelines for what constitutes information technology in the area of traffic management systems and infrastructure.

Statewide Strategy for Traffic Information Systems Needed

We recommend the adoption of budget bill language to require the Department of Transportation to convene a steering committee to determine how the department should use traffic information available from the Advanced Traffic Management System.

Just as the department needs a coordinated strategy for the development of ATMS software and TMCs, it also needs a coordinated, statewide strategy for how it will use and disseminate traffic information. To date, Caltrans has focused on using the information from ATMS to improve the internal operation of TMCs. While this was the original goal of ATMS, opportunities exist to use the data for many additional uses related to the department's ultimate goal of improving mobility.

Traffic Management Software Provides New Opportunities. The information that ATMS can provide is of tremendous value to transportation planners and engineers, as well as the general public. For example, Caltrans could provide a more accurate and detailed congestion monitoring report than it does at present. Currently, the department provides an annual report on highway congestion in the state's urban areas. The report relies primarily upon vehicles equipped with a device (known as a tachometer) to measure speed. Because this is a costly and labor-intensive method, the department limits its data collection to two days per year.

The ATMS system, however, provides the department with much more detailed highway performance information for *every day* of the year. For example, data are available on the daily volume of traffic in *each* lane on *every* freeway covered by the system. These data could be used not only to better assess the levels of congestion in each region, but also to conduct detailed before and after studies to determine the benefits of specific transportation projects, such as a new high occupancy vehicle lane or a new interchange.

Additionally, the ATMS system could enable the department or the private sector to provide reliable, real-time traffic information to the public. Finally, it could allow the department to incorporate performance measures, such as travel time and reliability, into policy and funding decisions, a goal that the department has been working towards for several years.

Pilot Project Successful. Caltrans has begun exploring the opportunities provided by ATMS, through the development of a pilot project, in coordination with the National Science Foundation and the Partners for Advanced Transit and Highways (PATH) program. The goal of the project was to develop an application that converts raw data from ATMS into user-friendly traffic information. Known as the Performance Measurement System (PeMS),

the software, operated by UC Berkeley, can provide real-time freeway information accessible via the web or cell phone including:

- Current speeds and freeway incidents by freeway segment.
- Hours of delay on specific freeway corridors.
- Amount of delay that can be reduced via ramp metering.
- Number of vehicles using carpool lanes.
- Travel time predictions one hour ahead of time.
- Condition of loop detectors.

Currently Los Angeles is the only district that is sending its ATMS data to UC Berkeley's PeMS project, although other districts that have ATMS could do so relatively easily. The PeMS software is operational and has been extensively tested, but is not yet accessible to the public.

Analyst's Recommendation. The department needs a strategy for how to take advantage of the new traffic information data that are being made available through ATMS. The PeMS offers a glimpse into the many benefits that can be gained from the data. In order to ensure that the department uses a statewide approach to reaping the full benefits of this technology, we recommend the following budget bill language in Item 2660-001-0042:

> The Department of Transportation shall establish a steering committee to: (1) determine how the department should take advantage of the Advanced Traffic Management System data for congestion monitoring purposes; (2) develop recommendations for how this data could be used to improve the department's various business practices, including but not limited to planning, design and engineering, maintenance, and traffic operations; and (3) develop a departmentwide approach for how the information should be disseminated to the public. The committee shall include, but not be limited to, a representative from each of Caltrans Traffic Operations, Planning, and Highway Program, the Information Systems and Service Center, UC Berkeley's PATH program and the California Chamber of Commerce. The committee shall provide a report to the Chair of the Joint Legislative Budget Committee, the chair of the fiscal committee in each house, and the chair of the transportation policy committee in each house by December 1, 2001.

INTERCITY RAIL PROGRAM

The intercity rail program was established to provide motorists traveling long distances with a safe, efficient, and cost-effective transportation alternative to the automobile. Currently, the state supports and funds

intercity rail passenger services on three corridors—the Pacific Surfliner (formerly the San Diegan) in Southern California, the San Joaquin in the Central Valley, and the Capitol in Northern California. All train routes are supplemented and integrated by a dedicated feeder bus service.

The Capitol intercity rail service is administered by the Capitol Corridor Joint Powers Authority (CCJPA) which started on July 1, 1998, following the enactment of the Intercity Passenger Rail Act of 1996 (Chapter 263, Statutes of 1996 [SB 457, Kelley]). Caltrans administers service on the remaining two rail corridors. In addition to providing for the operation of service, Caltrans and CCJPA also plan for the capital improvements needed to upgrade the respective corridors to provide expanded service. Both Caltrans and CCJPA contract with Amtrak for the operation and maintenance of the intercity rail service.

Budget Requests Substantial Increase in Operating and Capital Project Funding. For 2001-02, the budget requests $73 million for Amtrak to provide intercity rail service. This is about $9.5 million above the current-year level. The higher funding level includes additional monies to operate new round-trip service on the Capitol and San Joaquin corridors. Furthermore, the budget requests $98 million from the Public Transportation Account (PTA) for intercity rail track and signal improvements on all three passenger rail corridors.

In the following sections, we discuss:

- The ridership and financial performance for intercity rail service in 1999-00.
- The proposed major expansion of service as envisioned under Caltrans' latest ten-year rail plan.
- The cost and ridership performance implications stemming from the ten-year rail plan.
- Recommendations for intercity rail budget requests.

Ridership Increases, As Do State Costs

Overall intercity rail performance, including ridership and farebox (recovery) ratios, has improved. State operating costs have also increased.

In the *Analysis of the 2000-01 Budget Bill*, we provided an in-depth review of the state's intercity rail program through 1998-99, including an examination of the system's passenger rail service levels, historical performance, and costs to the state. (Please see pages A-62 through A-75 of our 2000-01 *Analysis*.)

Total Ridership Continues to Increase; But Growth Concentrated on the Capitol Service. In 1999-00, total ridership on the three intercity rail corridors increased by about 6 percent over the previous year, from about 2.8 million to over 2.9 million passengers. However, this growth was not evenly experienced by all three services. In fact, virtually all of the increase occurred on the Capitol corridor, with an increase of about 33 percent (516,000 trips to 684,000 trips between 1998-99 and 1999-00). While the Pacific Surfliner's ridership stayed relatively flat (with only a two-tenths of a percent increase), the San Joaquin suffered a slight loss in total ridership, with a 1.5 percent decline below the 1998-99 level.

As total ridership increased on the aggregate intercity rail system, revenues generated primarily from passenger fares also increased. In 1999-00, fare revenues totaled $44.5 million, about 12 percent higher than the previous-year level.

While State Operating Costs Also Increase, Farebox Return Improves. Overall operating costs for the three intercity rail corridors increased by 8.8 percent to a total of approximately $61 million in 1999-00. The increase was due to a combination of more round-trip service on the Capitol and on the San Joaquin. Intercity rail revenues for all three rail corridors combined increased at a faster rate than operating costs between 1998-99 and 1999-00. As a result, the aggregate farebox (recovery) ratio—an indicator of the rail service's ability to recoup its operating costs—rose from 40 percent to about 43 percent. Thus, in 1999-00, for every dollar spent operating intercity rail service, about 43 cents were recovered through fare revenues. Individually, the farebox ratio increased on both the Pacific Surfliner and Capitol corridors, but dropped from the 1998-99 level on the San Joaquin.

Long-Range Plan Envisions Major Service Expansion at Great Cost

In 2000, Caltrans produced a long-term passenger rail plan that calls for $3.2 billion in capital projects to improve and expand intercity rail service over the next ten years. The plan also estimates annual state operating costs to be $118 million by 2008-09.

Caltrans Updates Its Ten-Year Rail Report. In May 2000, Amtrak published a passenger rail capital investment plan that identifies proposed intercity rail capital improvement projects. The plan also provides ridership and cost projections based on the completion of the projects. In October 2000, Caltrans issued its statutorily required ten-year rail passenger program report. This report incorporates the recommended capital projects and performance data from the Amtrak plan and delineates Caltrans' plans for the state's intercity rail service from 1999-00 through 2008-09. The report envisions a substantial expansion of the state's intercity rail service over ten years in order to improve customer service. This

improvement is to be achieved by expanding existing services and adding new routes. Figure 8 summarizes the expansion of service called for in the plan.

Figure 8

Ten-Year Intercity Rail Plan

1999-00 Through 2008-09

Expansion of Existing Services

- Sixteen round trips per day on the Pacific Surfliner (a 45 percent increase over 2000-01 service).
- Eight round trips per day on the San Joaquin (a 60 percent increase over 2000-01 service).
- Twelve round trips per day on the Capitol (a 33 percent increase over 2000-01 service).

New Route Service

- Coast route, with service between San Francisco and Los Angeles.
- Monterey route, with service between San Francisco and Monterey.
- Coachella Valley route, with service between Los Angeles and the Coachella Valley.
- Extensions to existing routes, including the Capitol (with new service between Sacramento and Reno, Nevada) and the San Joaquin (with new service between Sacramento and Redding).

Huge Capital Costs to Construct Vision. Caltrans estimates that the rail plan would cost $3.2 billion over ten years to construct. Of this amount, the bulk would be for track and signal improvements, totaling an estimated $2.5 billion. In general, these improvements are expected to improve on-time performance, reduce travel times between stations, and expand track capacity for additional round trips between cities.

Figure 9 summarizes the estimated capital costs for each corridor as well as for the proposed *new* routes.

Large Operating Costs to Implement Vision. The projected costs contained in Figure 9 are for capital improvements only. They do not include ongoing operations and maintenance costs. According to the report, if all services contained in the plan were implemented, annual state operating costs would amount to approximately $118 million in 2008-09. In addition, there will be significant ongoing costs for heavy maintenance of rolling stock (including rebuilding and replacing various parts of locomo-

tives and train cars). (The 2001-02 budget, for example, includes about $5 million for annual heavy maintenance of the existing state-owned rail fleet. As more equipment is purchased, ongoing heavy maintenance costs will increase.) Finally, there will be annual administrative and marketing costs. In 1999-00, these costs totaled about $7.9 million.

Figure 9

Intercity Rail
Projected Ten-Year Capital Cost

(In Millions)

Route	Total
Existing Routes	
Pacific Surfliner	$1,347
San Joaquin	961
Capitol	328
Subtotal	($2,636)
Proposed New Routes	$580
Total	**$3,216**

Significant Policy Implications From Long-Range Plan

In evaluating Caltrans' ten-year plan, the Legislature will need to assess what it wants the state's role to be in funding intercity rail vis-a-vis commuter rail.

State and Local Rail Responsibilities. The passenger rail transportation system in California includes two major components—the intercity rail service which is the responsibility of the state and the commuter and urban rail service which is the responsibility of local and regional agencies.

- ***Intercity Rail***. This component primarily serves business and recreational travelers going between cities in California and to other parts of the country. Because it provides services *among* regions, it is the responsibility of the state.
- ***Commuter and Urban Rail.*** These services are provided within urban or metropolitan areas. Commuter rail generally offers frequent service during the commute hours throughout a metropolitan region that may cover a number of cities. Urban rail generally provides regular service throughout the day. Because these two services primarily serve local and regional transportation needs, they are the responsibility of local and regional agencies.

Current State and Local Roles Becoming Blurred. Senate Bill 45 (Kopp) defined the state's role in mass transportation as primarily providing for interregional transportation. As a result, within the rail program Caltrans concentrates primarily on providing intercity rail service, while leaving regional rail systems to local and regional agencies.

This distinction, however, has started to blur. For example, on portions of the Pacific Surfliner corridor, state-supported rail transportation is in direct competition with regional commuter rail systems. Specifically, between Oceanside and San Diego, the Surfliner travels the same corridor with the Coaster, a regional commuter rail system. North from Oceanside to downtown Los Angeles, the Surfliner shares tracks with Metrolink, another commuter rail service.

The blurring of responsibilities is also found in northern California. For example, the San Joaquin service provides daily service between Stockton and Oakland, while the Altamont Commuter Express—another regional commuter rail service—provides daily round trips between Stockton and San Jose.

Implications of the Ten-Year Plan. The increased investments proposed for intercity rail further blur the distinction between the state-supported intercity rail program and regional commuter rail systems. This is because Caltrans' plan to expand the intercity rail service, through adding more round trips particularly at commute hours, moves the state closer to providing regional commuter rail service. Essentially, this moves the state further away from the policy established under SB 45 which envisions the state providing interregional rail service while local agencies provide regional service. If the Legislature determines that the state's responsibility should continue to be interregional transportation, then as intercity rail investment decisions are made, the Legislature should consider whether capital and service enhancements primarily benefit interregional or regional mobility.

Ridership Increase Could Be Substantially Less Than Projected

Caltrans forecasts annual ridership to grow by 84 percent (from 2.9 million to 5.4 million) over the ten years from 1999-00 through 2008-09. This forecast assumes the investment of $2.6 billion for the construction of capital improvement projects and increases in intercity service. Our analysis shows that the projected ridership increase resulting from a $2.6 billion investment could be substantially less.

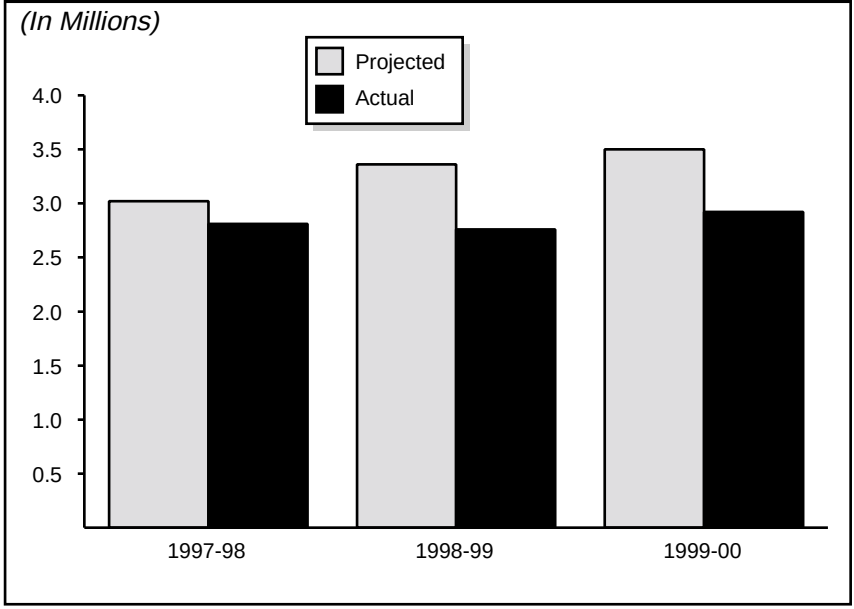
With the plan's capital improvements of $2.6 billion on the existing three corridors, the department projects total ridership to increase by 84 percent (from 2.9 million to 5.4 million) over ten years.

Justification for Capital Expenditures Depends on Ridership Projections. Expending $2.6 billion for capital improvements on the three rail corridors may be justified if, as a result, more passengers use the service, thereby reducing traffic on state highways. Another benefit of increasing ridership is the reduction in the subsidy the state pays per passenger. For instance, in 1999-00 the state operating cost per passenger was a little over $25 per rider. The department forecasts that, with the projected ridership increase, the state operating cost per passenger would fall to $16 per rider in 2008-09. This estimate, however, relies on both controlling operating costs and attracting additional riders at the rate projected.

Accurate Projections Are Difficult, However. In the past, Caltrans has been too optimistic in its intercity rail ridership projections. As shown in Figure 10, actual ridership has been between 7 percent and 18 percent below the department's ridership projections from 1997-98 through 1999-00. To the extent the projected ridership fails to materialize, the state subsidy would remain high.

Figure 10

Intercity Rail Ridershp: Projected vs. Actual



Ridership Increase Resulting From Capital Improvements Overstated. Caltrans projects an 84 percent increase in ridership over the ten-year period of planned capital improvements. This is an average annual in-

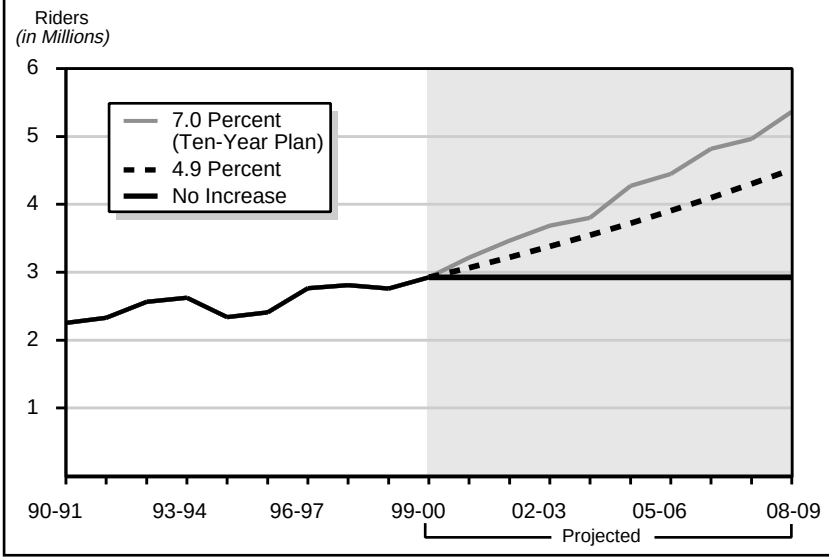
crease of 7 percent. Our analysis shows that the department's projections for ridership growth may be significantly overstated. For example, Caltrans' projections reflect growth rates which are significantly higher than what was achieved in the previous decade.

Figure 11 compares the department's projected annual ridership under its ten-year plan with two scenarios: (1) no increase in ridership and (2) a 4.9 percent increase (the average annual increase from 1995-96 through 1999-00). Figure 11 shows that the department's projected growth of 7 percent would, at the most, increase ridership by a *cumulative* total of 12 million over *ten* years. Using a lower ridership growth rate of 4.9 percent results in a cumulative increase in ridership of about 7 million.

Figure 11

Ridership Growth Projections

1990-91 Through 2008-09



The actual benefit in increased ridership may be even less than 7 million, however. This is because the estimated growth in ridership over the decade is not *all* attributable to the capital projects identified in the ten-year plan. Ridership would likely increase even in the absence of the capital improvements, as a result of growth in population and traffic congestion. If we were to assume that ridership would grow naturally due to other factors, the direct effect of a $2.6 billion investment on ridership could be significantly lower.

To place this ridership gain in context, in *one* year (1998-99) Metrolink transported 6.7 million passengers, Caltrain carried 8.6 million passengers, and the Bay Area Rapid Transit (BART) rail system served 81 million passengers. While these are commuter rail systems and not intercity, in several cases the distances and areas they serve are analogous to intercity rail service.

Budget Request Begins to Implement Ten-Year Rail Plan

The 2001-02 budget proposes $98 million for track and signal improvements on all three of the intercity rail corridors, as well as a $9.5 million increase for added round-trip service on the Capitol and San Joaquin corridors.

In the budget year, Caltrans requests substantial funds from PTA for both capital improvement projects and expanded service on two rail corridors to carry out the rail plan. Specifically, the budget requests $98 million for capital improvement projects. The requested funds are designated for track and signal improvements on the three intercity rail corridors, including the following:

- $48 million for track improvements on the Pacific Surfliner in Orange County.
- $29.4 million for double-tracking and signal improvements on the San Joaquin in Contra Costa County.
- $20.6 million for double-tracking on the Capitol in Yolo County.

The budget also requests $9.5 million for additional round-trip services on the San Joaquin and Capitol corridors. Specifically:

- $4.2 million for an additional round trip between Bakersfield and Sacramento, bringing the total number of round trips on the San Joaquin corridor to six.
- $5.3 million for the Capitol corridor to continue operating two new round trips, funded by TCRP and anticipated by CCJPA to begin service in April 2001. Continuing the two additional round trips would provide a total of nine round trips between Oakland and Sacramento, six round trips between San Jose and Oakland, and three round trips between Sacramento and Roseville.

In the following sections, we analyze and provide recommendations first for the budget proposals for capital improvements and then for the expanded intercity rail service.

Based on Ridership Performance, Not All Capital Improvements Justified

We recommend deletion of $77.4 million requested for capital improvements on the Pacific Surfliner and San Joaquin because new capacity improvements in the past have not resulted in commensurate ridership increases. (Reduce Item 2660-301-0046 by $77.4 million.)

Capital Improvements Should Be Justified by Increased Ridership. Aside from improving safety, a key reason to make capital improvements is to increase the number of passengers who ride the system. According to department staff, the proposed track and signal projects would increase track capacity, thereby enabling an increase in round-trip service that would generate additional riders. Therefore, whether to invest in additional capital improvements should be based on evidence that the increased expenditures will increase ridership.

Our review, however, shows that an increase in round-trip service on two of the three corridors has not resulted in a corresponding increase in ridership in recent years. Figure 12 shows the number of round trips on the three corridors from 1990-91 through 1999-00 and how total ridership has changed over the same period. As Figure 12 shows, ridership on the Pacific Surfliner has either fallen or remained relatively flat over the past decade, even as additional round trips were added and other improvements were made to the regional system. This may in part be due to competition from other commuter rail systems (Metrolink and the Coaster) that came on line during the 1990s providing service in the same rail corridor. As for the San Joaquin, the large increase in total ridership occurred in 1996-97 and 1997-98, prior to the addition of new round trips to the corridor. When new round trips were added (1998-99), ridership remained flat. On the Capitol, a rail system that serves two congested travel corridors and has little or no competition from other commuter rail systems, ridership has increased substantially as new passenger trains have been added to service.

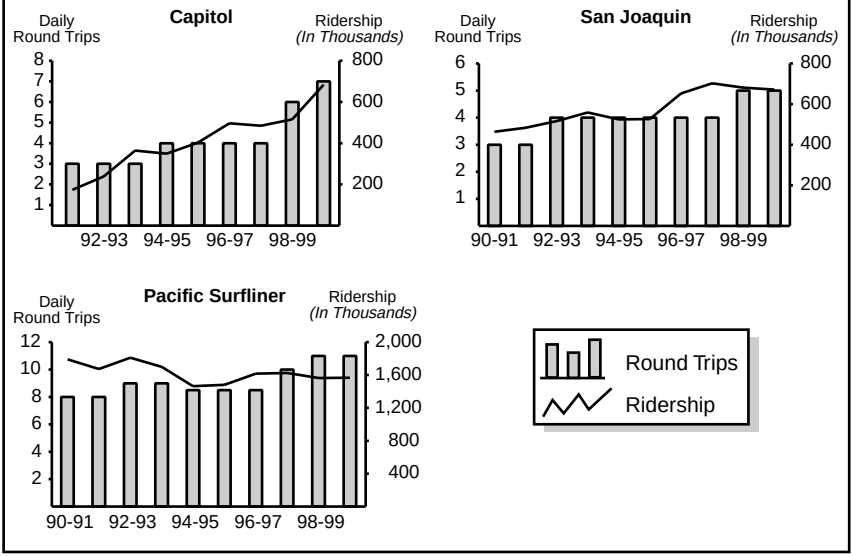
Obviously, there are other factors that affect ridership performance on a corridor beyond capital improvements that allow for an increase in the number of round trips. These factors include fare price, availability and reliability of alternatives to passenger rail, train on-time performance, travel times between rail stations, and changing travel patterns among regions. Therefore, due to the number of factors that affect ridership, expanding services may not result in a corresponding increase in riders.

Analyst's Recommendation. Capital improvements to the intercity rail services are warranted to the extent these improvements lead consistently to more use by riders. However, as we discussed above, the additional supply of service for both the Pacific Surfliner and the San Joaquin in

recent years, facilitated by various capital improvements, have not generated a commensurate increase in riders. Accordingly, we recommend that the capital projects proposed for the two services in 2001-02 not be funded.

Figure 12

Intercity Rail Service
Ridership and Number of Daily Round-Trips



As for the Capitol corridor, our review shows that the requested improvements are warranted. According to CCJPA staff, the tracks between Oakland and Sacramento are currently at capacity. The $20.6 million proposed for double-tracking a portion of this line will allow for more round-trip service to be added. Based on historical growth in ridership and apparent demand for improved service (as evidenced by recent high rates of ridership growth), the requested funding appears justified.

Accordingly, we recommend reducing funding for intercity rail capital projects by $77.4 million.

Expansion of Service on San Joaquin Corridor Not Justified

We recommend deletion of $4.2 million requested for an additional round trip on the San Joaquin corridor. This is because (1) recent increases in round-trip service have not generated new ridership and (2) state operating cost per passenger has increased markedly. (Reduce Item 2660-001-0046 by $4.2 million.)

We recommend that $4.2 million requested for the sixth round trip on the San Joaquin be rejected for two reasons. First, as we discussed above, the recent increase in round-trip service on this corridor has not generated an increase in ridership. Instead, as Figure 12 shows, the number of passengers has actually declined slightly—by 4.4 percent between 1997-98 and 1999-00. Second, associated with the ridership decline, state operating cost per passenger has increased markedly. Between 1997-98 and 1999-00, state costs increased from about $24 to over $36 per passenger (a 47 percent increase).

In view of the above, expending additional state resources for new round-trip service does not seem warranted at this time. Therefore, we recommend reducing funding for intercity rail support by $4.2 million.

Expansion of Service on Segments of Capitol Corridor Premature

We recommend deletion of $1.8 million requested to continue operating two new round trips on certain segments of the Capitol corridor. This is because the Capitol Corridor Joint Powers Authority has not secured an agreement with the private owner of the tracks to operate new trains, and is unlikely to do so in the near future. Therefore, funding for these segments is premature. (Reduce Item 2660-001-0046 by $1.8 million.)

New Service on Two Segments of Capitol Corridor Premature. The Capitol provides daily round-trip service between San Jose, Oakland, Sacramento, and Roseville. In 2000-01, TCRP provided $1.9 million to expand service on the entire corridor by two new round trips. Discussions with CCJPA staff indicate that the two new round trips between Oakland and Sacramento will begin in April 2001. Additional round trips, however, between San Jose and Oakland and between Sacramento and Roseville are unlikely to begin in the current year. According to CCJPA, the authority has not completed negotiations with the owner of the rail corridor to provide the expanded service. The negotiations depend largely on a technical (engineering) analysis currently being conducted to determine the capital improvements required to accommodate more passenger trains. Since the capital improvements must be completed before more service can be added on these two segments, it is unlikely that the new round trips will be initiated in the current year or in the budget year.

Accordingly, we recommend deleting funding for additional round-trip services between San Jose and Oakland ($1.2 million) and between Sacramento and Roseville ($0.6 million).

New Service Appears Justified on Third Segment. However, as we discussed previously, the Capitol has experienced substantial ridership

growth in recent years. Between 1997-98 and 1999-00, ridership grew by over 41 percent. Therefore, there appears to be demonstrated ridership demand for new service expansions. Furthermore, CCJPA has secured an agreement with the private railroad to operate the new round-trip service on the segment between Oakland and Sacramento beginning in the current year. Therefore, continuing the additional two round trips on the segment between Oakland and Sacramento appears justified.

Operating Costs for Existing Intercity Rail Service

We withhold recommendation on $63.8 million requested to support existing intercity rail service because the amount needed will likely be different from current estimates. Specifically, more current cost estimates will be forthcoming from Amtrak in March 2001. We recommend that the department provide the updated cost estimates at budget hearings. Based on that information, the Legislature should adjust the amount of support for intercity rail services accordingly.

The budget requests $63.8 million to support Amtrak's costs for continuation of intercity rail services in 2001-02.

Updated Amtrak Cost Estimates Will Be Forthcoming. The budget request is based on cost estimates provided by Amtrak in 2000. We understand that Amtrak will provide Caltrans with updated estimates in March 2001. Accordingly, we withhold recommendation on $63.8 million for intercity rail services. We further recommend that Caltrans provide the updated cost estimates at budget hearings and that the Legislature adjust the proposed appropriation based on the updated information.

RURAL TRANSIT

Rural Transit System Grant Program

The budget proposes $18 million to provide grants to public agencies in rural areas for transit capital improvements. We recommend deleting funding for the grant program from the budget bill. Instead, if the Legislature determines that such a grant program has merit, we recommend that funding be provided in legislation. (Reduce Item 2660-101-0046 by $18 million.)

Budget Creates New Grant Program. For 2001-02, the budget requests $18 million in one-time funds to implement a new rural transit system grant program. According to Caltrans, the concept of the program is to provide competitive grants to rural public agencies for transit capital

improvement projects, such as bus and van procurement, rehabilitation, or facilities improvements.

New Program Should Be Defined in Legislation. The new rural transit grant program should be created through legislation in order for the Legislature to review the proposal in terms of program objectives and funding level and to ensure that the program meets the Legislature's own priorities. With regards to the funding amount, Caltrans has not conducted a needs assessment to determine the amount of funds that would be required to adequately address rural transit capital project needs. Consequently, there is no basis for the requested $18 million. Therefore, to allow for legislative fiscal review, funding for the new program should also be included in the enabling legislation. The administration recognizes that the new program should be authorized in enabling legislation and indicated that it will propose trailer legislation. However, funding for the rural transit grant proposal is included in the budget act.

Analyst's Recommendation. Without prejudice to whether such a grant program is warranted, we recommend deleting funding for the rural transit grant program from the budget bill. If the Legislature determines that a rural transit grant program has merit, we recommend that funding be provided in the legislation that defines the program.

OTHER ISSUES

Department Should Report on New Plan to Maintain Historic Properties

We recommend the adoption of supplemental report language requiring the department to submit a revised work plan and cost estimates for maintaining and restoring historic properties located on the proposed State Route 710 corridor.

Background. Since 1964, Caltrans has proposed extending the State Route (SR) 710 to ease traffic flow through Pasadena, South Pasadena, and a portion of Los Angeles. In preparation for this project, Caltrans purchased about 500 properties along a section of the corridor that was envisioned for the project. Of the properties bought, 92 are now designated as historic.

Although the project is contained in the Southern California Association of Government's long-range plan and has strong support among some members of the surrounding community, local opposition and environmental concerns have prevented the project from progressing. However, in 1998, 24 years after the initial environmental impact statement was

approved, the Federal Highway Administration approved the environmental impact statement containing the proposed alignment for the project. Nevertheless, litigation regarding the proposed route is ongoing. In addition, full funding of the project (at $823 million) has yet to be identified. Consequently, it is likely that the department will need to maintain the historic properties on the proposed alignment for some time. Assuming that some type of project is built on this right-of-way, the department would then relocate the properties and subsequently sell them.

Department Has Poor Track Record of Managing Historic Property Funds. As the property owner, Caltrans is responsible for maintaining its historic properties at certain standards set by state and federal law. Our review indicates that the department has a poor track record with respect to maintaining the SR 710 properties and managing the funds available for such purposes. According to a recent report by the Bureau of State Audits, Caltrans allowed the historic properties on the SR 710 corridor to deteriorate and did not seek to rehabilitate them until concerns were raised by local communities in the 1990s.

The department secured an initial $3.2 million in 1994-95 for rehabilitation purposes, but later determined that this amount was inadequate. It then obtained an additional $16 million from CTC to complete rehabilitation for 81 properties. However, instead of using these funds to make strategic improvements on all of the properties, the department expended all its resources on 39 (less than half) of the properties, spending an average of almost $500,000 per property. The department subsequently requested $22 million from CTC in March 2000, but CTC rejected the request, directing Caltrans to develop alternatives for minimizing costs.

Budget Requests Authorization to Spend $3.7 Million in 2001-02, $1.5 Million Ongoing. The budget requests authorization to spend $3.7 million in 2001-02 and $1.5 million annually from 2002-03 through 2004-05 to maintain the historic properties on the SR 710 corridor. Funding for this work is available from a special fund, the Historic Property Maintenance Fund, created by Chapter 759, Statutes of 1999 (SB 1221, Schiff). Funds in the account are specifically designated for the maintenance and operation of historic properties owned by the department. The account has sufficient funds to accommodate the amount requested in the budget.

Proposal Is Based on Cost Estimates for "Mothballing" Strategy. The department indicates that the total cost of repairing the remaining 42 properties is $4.9 million. However, this estimate was prepared by the Depart-

ment of General Services under the assumption that Caltrans was going to repair the properties according to a standard known as mothballing. This approach allows the department to protect the property at a level that maintains the physical structure but does not have to be habitable.

Department Is Revising Strategy and Cost Estimates. Due to concerns raised by the State Historic Preservation Office (SHPO), Caltrans is also considering a more costly alternative which prioritizes the historic features of the properties and ensures the structural integrity of each building. In coordination with SHPO, the department is developing revised cost estimates for each property. The department is conducting these assessments in phases and should complete them by September 2001.

Recommend Report Containing Revised Cost Estimate and Schedule. To ensure that the department adopts a strategic approach to developing its work plan for maintaining the historic properties located on the proposed SR 710 corridor, we recommend adoption of the following supplemental report language in Item 2660-001-0365:

> The Department of Transportation shall prepare and submit a revised work plan and revised cost estimates for all historic properties in the State Route 710 corridor to the Chair of the Joint Legislative Budget Committee and the chair of the fiscal committee in each house by November 1, 2001. The revised work plan shall be based on a clearly defined method of prioritization that recognizes that not all features contribute equally to the historic character of each building.

HIGH-SPEED RAIL AUTHORITY
(2665)

The California High-Speed Rail Authority (HSRA) is responsible for developing and implementing an intercity high-speed rail service that is fully integrated with the state's existing mass transportation network. The California High-Speed Rail Act of 1996 (Chapter 796, Statutes of 1996 [SB 1420, Kopp]), established HSRA as an independent authority consisting of nine members appointed by the Legislature and Governor. The HSRA is required to develop and submit a plan to the Legislature and Governor to finance, construct, and operate a statewide intercity high-speed rail network. Chapter 796 scheduled HSRA to sunset at the end of 2000-01.

Chapter 791, Statutes of 2000 (AB 1703, Florez) extended the sunset date until December 31, 2003, reconstituted the authority's membership, and required that the authority continue planning for the proposed 700-mile long train system.

The budget proposes expenditures of $1 million for support of HSRA in 2001-02 to continue administering environmental planning contracts awarded in the current year.

Preliminary Environmental Review Initiated

We recommend that the High-Speed Rail Authority provide estimates on costs to continue contracting for environmental assessments of the proposed rail corridors at budget hearings. Based on that information, the Legislature should provide the amount needed to fund the preliminary environmental assessment work.

Environmental Review Funding. As required by Chapter 796, the authority submitted a business plan to the Legislature and Governor for the construction and operation of a high-speed rail system in 1999-00. In the current year, with $5 million provided in the 2000 Transportation Congestion Relief Program, HSRA has entered into several contracts with

engineering firms to begin environmental impact reviews of the rail system alignments proposed in the plan. According to HSRA staff, the total cost, including the current-year amount, to complete all preliminary environmental impact reports is estimated at $25 million. The authority also expects the environmental reports to be complete by 2002-03. The budget, however, provides no funds in the budget year to continue the contracts.

Recommendation. In order to allow the environmental assessments begun in the current year to continue in 2001-02, we recommend that (1) HSRA provide the Legislature at budget hearings with cost estimates of the budget-year costs for the environmental assessment work, and (2) the Legislature provide the requisite funding in the budget.

CALIFORNIA HIGHWAY PATROL (2720)

The California Highway Patrol (CHP) is responsible for ensuring the safe, lawful, and efficient transportation of persons and goods on the state's highway system. In addition, CHP provides protective services and security for state employees and property, and carries out a variety of other mandated tasks related to law enforcement.

The budget proposes $987.4 million to support CHP in 2001-02. This is approximately $21.3 million, or 2.2 percent, above estimated current-year expenditures. Most of the increased expenditures would fund (1) the addition of 76 motorcycle officers in major metropolitan areas, and (2) grants to local law enforcement agencies to collect data on the race of motorists they stop.

Most of CHP's budget is funded from the Motor Vehicle Account (MVA), which receives revenues primarily from registration fees, driver license fees, and other vehicle-related fees. For 2001-02, MVA funds would make up 90 percent of CHP support costs.

Expansion of Traffic Congestion Relief Efforts Overfunded

The department proposes to add 76 motorcycle officers to patrol congested urban freeways, and requests funding to support these officers for the entire 2001-02 fiscal year. However, because it will take some time to hire these new officers, full-year funding for the positions will not be needed. Accordingly, we recommend a reduction of $1.3 million due to overbudgeting. (Reduce Item 2720-001-0044 by $1.3 million.)

The department requests $8,850,000 for 76 additional motorcycle officers to patrol congested freeways in the state. These officers would supplement 96 officers that were added for the same purpose in 2000-01.

Positions Will Be Vacant Part of Year. In its proposal, the department acknowledges that the new officers will not all be in place at the

beginning of the budget year. This is because it will take some time to hire new officers and place them in the training academy. Indeed, of the 96 officers authorized for 2000-01, 39 officers still had not been hired as of January 2001.

The department estimates that because of the anticipated hiring delays, costs for only 63.2 personnel-years in officers' time will be incurred 2001-02. (This amounts to a 12.8 personnel-year vacancy for the fiscal year.) However, the budget requests full-year funding for the 76 positions.

Costs for Anticipated Vacancies Should Be Deleted. The department estimates that the cost for the 12.8 personnel-years would be $1,262,000. Because these expenditures will not be incurred by the department in the budget year, we recommend that $1,262,000 be deleted.

Pilot Project Fails to Expand Non-English Outreach Efforts

The department requests an augmentation of $531,000 to provide ongoing funding for six officer positions for the El Protector program. These positions had been established on a limited-term basis to expand the program's focus to include other ethnic groups in addition to Hispanic motorists. However, there has been almost no such effort. Accordingly, we recommend that the limited-term positions be discontinued and the requested amount be deleted. (Reduce Item 2720-001-0044 by $531,000.)

The CHP's El Protector program was established in 1988 in response to data that showed Hispanic motorists were disproportionately involved in fatal automobile accidents and alcohol-related arrests. The program seeks to raise awareness of traffic safety issues among Hispanics by using bilingual officers to make presentations and generally provide information at various public forums.

Pilot Expansion Undertaken. For 1999-00, the department requested and received six limited-term positions to expand the program beyond the Hispanic community. The positions were dedicated to a two-year pilot to serve "other groups of non-English speaking drivers with disproportionately high percentages of involvement in traffic accidents and fatalities." Within the first six months of the pilot, the department was to collect data identifying which additional ethnic groups were over-represented in traffic accidents and fatalities. For the remainder of the pilot the department would determine a course of action to reduce accident rates within those identified groups. At the end of the pilot on July 1, 2001, the department is to provide a report to the Legislature on the results of the pilot project.

Expansion Does Not Meet Pilot Objective. The department now reports that the six positions devoted to the pilot have been focused on the Hispanic community. We believe this is inconsistent with the expressed objective of the pilot as previously approved by the Legislature. Although the department notes that it has translated some safety brochures into other languages, there is no evidence that the officers have in any meaningful way focused their efforts on non-Hispanic ethnic groups.

Permanent Continuation of Pilot Not Warranted. For 2001-02, the department requests $531,000 in baseline funding and authority to make permanent the six limited-term officer positions. The department argues this would allow CHP to continue outreach to non-Hispanic ethnic groups. However, because there is no evidence that the six positions have in fact been focused on non-Hispanic groups during the two-year pilot, we believe a continuation of the pilot would not achieve its stated objectives. Accordingly, we recommend that the Legislature delete this proposed augmentation. We would note that even without the augmentation, the core El Protector program would have seven permanent positions.

Existing Funds Available for Data Collection Grants Through 2001-02

The department requests $7 million for grants to local law enforcement agencies to collect and report data on the race of motorists they stop. For 2000-01, the department received $5 million to provide such grants, and so far has awarded a total of $1.1 million to 41 agencies. We anticipate that adequate funds will remain unencumbered from the current-year grant funds to meet the projected demand for 2001-02. Accordingly, we recommend that (1) these remaining funds ($3.9 million) be reappropriated to be available in 2001-02 and (2) the proposed $7 million augmentation for 2001-02 be deleted. (Reduce Item 2720-101-0001 by $7 million.)

In September 1999, the Governor directed CHP to collect and analyze data on the race and ethnicity of motorists that were stopped by CHP and local law enforcement agencies. The objective of this project was to determine whether motorists were being stopped primarily on the basis of their race or ethnicity and, if so, to what extent. This practice, known as "racial profiling," was prohibited by Chapter 684, Statutes of 2000 (SB 1102, Murray).

Racial Profiling Study to Be Conducted. Chapter 684 also requires that our office study data voluntarily provided by local law enforcement agencies with regard to racial profiling. We are required to provide our findings and recommendations to the Legislature by July 1, 2002. Cur-

rently, we are working with CHP to ensure that reliable data can be voluntarily provided by the largest possible number of local agencies.

Local Data Collection Requested. The Governor directed CHP to collect racial data for three years (calendar years 2000 through 2002). Data from local law enforcement agencies were to be reported voluntarily to CHP. In the first year of data collection, only 16 of the state's approximately 375 law enforcement agencies chose to participate.

Grants Offered to Encourage Local Participation. To encourage greater participation by local agencies, the Legislature appropriated $5 million to CHP in 2000-01 for grants to local law enforcement agencies that agreed to provide data using specified standards. The CHP solicited applications from all local police and sheriff departments, offering grants between $5,000 and $100,000 for the year, depending on the number of sworn officers in each department. As of January 2001, 30 police departments and 11 sheriff's departments were awarded grants, totaling $1.1 million. (Half of the original participants from 2000 are included in the grant program.)

Local Participation Is Limited. Although CHP has sent another letter extending the grant program to nonparticipating agencies, it is unknown whether any additional agencies will in fact voluntarily participate. Local agencies choose not to participate for a variety of reasons, including unwillingness to share sensitive information with the state, disagreement with CHP's methodology, and concern that data collection could interfere with officers' other duties.

Current Funding Adequate for Projected Needs. After disbursing grants to the agencies currently participating in the data collection program, CHP still has a reserve in the current year of $3.9 million for the grant program. Even if the 2001-02 participation rate were to triple that of the current year, CHP would have adequate funding to meet the needs of the program through 2001-02. Accordingly, we recommend that (1) the department's proposed increase of $7 million be deleted from its 2001-02 budget, and (2) the unencumbered balance of the $5 million be reappropriated to the department for 2001-02. In the event that additional local agencies participate in the program during the balance of the year, thereby expending current-year funds, we would modify our recommendation accordingly.

DEPARTMENT OF MOTOR VEHICLES (2740)

The Department of Motor Vehicles (DMV) is responsible for protecting the public interest in vehicle ownership by registering vehicles, and for promoting public safety on California's roads and highways by issuing driver licenses. Additionally, the department licenses and regulates vehicle-related businesses such as automobile dealers and driver training schools, and also collects certain fee and tax revenues for state and local agencies.

The budget proposes total expenditures of $680.6 million for support of DMV in 2001-02. This represents an increase of $18.5 million, or 2.8 percent, above estimated current-year expenditures.

About $344 million (51 percent) of the department's total support will come from the Motor Vehicle Account and $269 million (40 percent) from the Motor Vehicle License Fee Account. The remaining support will be funded primarily from the State Highway Account and reimbursements.

Fraud Persists in Driver License Program

Over the past several years, evidence of potentially widespread fraud in the Department of Motor Vehicles' (DMV's) issuance of driver licenses has come to the attention of the Legislature. Despite attempts to curb this fraud through legislation and administrative measures, recent reports indicate that the problem persists. The department now requests an additional $13.3 million for driver license fraud prevention and investigation. While we believe that new efforts are needed, we find that the department's proposal fails to justify the particular solutions identified over various alternatives. Accordingly, we recommend that the Legislature delete the proposed augmentation at this time, and direct the department to develop and present at the May Revision a fuller and more cohesive solution that takes into account additional information expected to become available this spring. (Reduce various items by $13.3 million.)

The California Driver License (CDL) is statutorily recognized as the primary form of identification used in the state. Besides conveying evidence of one's driving privilege, the CDL is commonly used to cash checks, secure credit, obtain social services, register to vote, and perform various other financial, governmental, and legal transactions that require certain evidence of one's identity. It is therefore critical that the integrity of the license as a positive form of identification be protected. Unfortunately, the value and importance of the CDL have made it a popular target for fraud.

Different Types of Fraud. There are three main types of fraud connected with driver licenses:

- ***Ineligible Persons Securing a License.*** Some persons cannot legally obtain a driver license because they do not meet certain criteria (such as age or residency requirements). They may nevertheless seek to secure a license from DMV by using falsified documents or otherwise hiding their ineligibility.
- ***Establishing Fictitious Identity or Multiple Identities.*** Individuals may fraudulently obtain one or more licenses with fictitious identities or aliases in order to hide a criminal past or to engage in criminal activity. This can effectively shield a criminal from law enforcement.
- ***Identity Theft.*** In some cases, an individual will fraudulently secure a driver license in the name of another person with the intent of victimizing that person. The impostor uses the license to obtain loans, cash checks, or otherwise purchase benefits in the name of the victim. The victim becomes aware of the problem when unexpected bills arrive or, in extreme cases, when an impostor's criminal activity results in a warrant for the victim's arrest. It takes an average of two years and much effort for a victim to restore his or her credit rating.

The full extent of these types of fraud is unknown. Estimates for the total number of fraudulent licenses range well over 100,000 per year.

Fraud Facilitated by Lax DMV Procedures. Although it is unrealistic to expect that fraud could be entirely prevented, lax procedures by DMV have made fraud relatively easy to commit. The main entry points for fraud are:

- ***Insufficient Document Review.*** The DMV staff must be able to authenticate a wide range of documents in connection with driver license issuance. However, according to DMV, staff have received almost no formal training in comparing photos and signatures in such documents. Moreover, until several months ago DMV did not verify social security numbers (which must be provided under state law) with the Social Security Administration. As a re-

sult, many counterfeit documents have been accepted by DMV, leading to the issuance of fraudulent CDLs.

- ***Failure to Positively Identify License Applicants.*** A common means of identity theft is for the impostor to request a "replacement" license from DMV. The impostor gives the name and other pertinent information of an unwitting victim, and requests that a new license be generated with the impostor's new photograph. Since DMV keeps on file the photographs that appear on all issued licenses, staff could expose the impostor by comparing the file photograph for the "old" license against the person requesting the replacement license. However, until recently DMV, citing time constraints, seldom made use of this resource. In addition, although the department obtains thumb prints for all license holders, it does not make use of these records to verify the identity of applicants for replacement licenses.

- ***Inadequate Oversight of DMV Staff.*** Fraud prevention relies to a large extent on the efforts of DMV staff who review license applications and issue licenses. The adoption of various fraud prevention procedures by DMV is undermined to the extent that individual DMV staff do not follow those procedures and supervisors fail to provide adequate oversight. Our review has found that many staff feel pressure to expedite transactions. Some staff react to this pressure by ignoring certain procedures, such as retrieving file photographs, in order to save several minutes.

  In addition, some staff have received bribes to issue licenses fraudulently, such as by accepting documents they know to be counterfeit or intentionally ignoring a mismatch between an applicant's photograph and the file photograph. Legislative hearings in 1997, a report in 1998, and a variety of news reports have highlighted persistent fraud activities carried out by DMV employees. Although the department made various efforts to respond to this fraud (investigating over 800 employees since 1997), recent news reports indicate that the problem persists. Our review finds that resources for DMV internal investigation are also limited. Of 225 investigators on staff, 13 are assigned to employee fraud. Moreover, DMV procedures for screening new applicants for employment and monitoring staff are weak. For instance, DMV does not conduct a background check on an employee who is transferred from a "nonsensitive" position to a "sensitive" position involving driver license records.

While there are other entry points for fraud, we believe that the three listed above account for the substantial majority of fraudulent licenses issued by DMV.

Recent Efforts to Address Fraud. A series of newspaper reports in September and October 2000 drew attention to the problems with driver license and vehicle registration fraud at DMV. In response, the Senate Transportation Committee held an interim hearing in November which investigated the extent and cause of fraud, and which sought to identify opportunities to mitigate these problems. As a result of the hearing, legislation has been introduced to address certain facets of DMV's license issuance procedures, such as its use of thumb prints and license photographs to verify identity. Further, the Legislature recently requested an audit of DMV's license issuance procedures by the Bureau of State Audits (BSA). In addition, DMV has instituted a number of procedural changes such as requiring that social security numbers be verified with the Social Security Administration and requiring that file photographs be matched against persons requesting a replacement license. The department has also convened an antifraud task force, and has undertaken a pilot project with the state Department of Justice (DOJ) to determine the adequacy of DMV's thumb print database for verifying identity.

Department Requests $13.3 Million for Reforms. The department now requests $13.3 million in the budget year to expand its fraud prevention activities. Specifically, the department requests:

- ***$7.7 Million for "Biometric" Verification.*** The department requests funding for contracts and equipment to electronically verify thumb prints and facial features for driver license applicants. The measurement of a person's physical characteristics to authenticate one's identity is know as biometric verification. The department proposes to use computers to match the thumb print and facial features of an applicant seeking a replacement or renewal license with the thumb print and photograph on file for the requested driver license number. According to the department, reviewing proposals, awarding the contract, and implementing the system could take several years.
- ***$3.8 Million and 21 Positions for Other Verification Activities.*** Because the biometrics proposal will take some years to implement, the department also proposes to immediately expand its manual verification of photographs and documents. Essentially, DMV's new procedures require (1) retrieval of the file photograph when an applicant for a replacement or renewal license lacks acceptable identification, and (2) inspection of identification documents by two DMV staff.

- ***$1.2 Million and 12 Positions for Investigators.*** The department proposes to increase the number of investigators for field office "interdiction" activities. Currently, the department has ten investigators assigned to these activities. Responsibilities include investigating suspicion of fraud by license applicants and employees, and spot-checking documents.

- ***$592,000 (and an Additional $700,000 in 2002-03) for Surveillance Systems.*** The department requests funding to increase video surveillance systems in field offices. These systems have been used to monitor the activities of customers and, to a lesser extent, employees at DMV offices. They also monitor DMV offices after hours. The proposal would upgrade equipment at some offices, and add equipment to some of the offices that lack it.

In sum, the DMV's proposal attempts to address problems with confirming the identity of license applicants, and, to a lesser extent, monitoring DMV employees and improving document verification. We believe that the proposal contains a number of elements which, taken individually, might be useful to address specific facets of DMV's license fraud problems. However, we conclude that the elements of the proposal taken together are not sufficiently comprehensive and integrated. Specifically, we have the following two concerns.

Proposal Insufficiently Developed. The largest component of the proposal involves biometric verification of a person's physical characteristics—namely facial features and thumb prints. By using computer technology to make these comparisons, the department can avoid the human error inherent in having DMV clerks visually confirm identity.

Biometric technology is changing rapidly, and it is not clear whether the best approach would be to compare thumb prints, fingerprints, facial characteristics, or some other feature or combination of features. Moreover, the department notes that its proposal is only a first step, and that to more fully combat fraud, additional data-searching capabilities will have to be added. Estimates for the expanded system range up to $50 million, and the time required to fully implement such a system and obtain necessary data files could exceed a decade. In addition, the use of biometric technologies raises legal and privacy issues. It is unclear, for example, whether DMV is statutorily authorized to use biometric data to combat crimes not directly related to the Vehicle Code. In summary, while we believe that biometrics holds promise for DMV's efforts to combat fraud, we believe that the current proposal is insufficiently developed, raising questions that require further review.

Proposal Does Not Address Employee Oversight Issues. The budget proposal also fails to adequately address employee oversight. While DMV

continues to develop procedures and policies that combat fraud, it is unclear how DMV plans to ensure that its employees actually observe those procedures and policies. As noted earlier, recent reports have highlighted how DMV employees sometimes ignore procedures to save time or commit fraud. We believe it will be necessary for DMV to improve its screening of employees for sensitive positions, as well as its identification of and response to employee misconduct. Further, the extent and adequacy of the department's proposal to improve employee training is not clear.

Impacts on Privacy and Efficiency Should Be Considered. In addition to the concerns discussed above, we note that DMV's response to its fraud problems raises policy questions about the potential trade-off between fraud prevention and customer convenience. The department notes in its proposal that some of its reforms have increased the time required to perform certain transactions. The Legislature has expressed concern about wait times for DMV customers, expressing in statute its intent that average wait times should not exceed 30 minutes. The projected benefits of DMV's fraud prevention activities will need to be weighed against their effect on customer convenience, including lengthened wait times and intrusions on privacy.

A More Integrated and Comprehensive Approach Needed. For the reasons discussed above, we cannot determine the degree to which DMV's proposal can be expected to reduce license fraud. Given the multifaceted nature of the license fraud problem, we believe that an appropriate response would be to draw together a comprehensive, integrated set of solutions. We believe such a response should include:

- ***Legislation That Addresses Identified Need for Statutory Revisions.*** The subjects of such legislation might include DMV's authorization to use biometric data; restrictions on the public availability of personal data and documents, including birth certificates; penalties for driver license fraud and identity theft; and the screening of applicants for DMV employment.
- ***Administrative Policies and Procedures Carried Out by DMV.*** These should ensure that driver license applicants are "positively identified," that documents are reliably authenticated, and that the activities of DMV employees are appropriately monitored.
- ***Personnel and Equipment.*** The DMV must be provided with a level of staff and appropriate equipment to ensure that it can perform its responsibilities effectively and efficiently. The appropriate level of support for fraud activities, however, can only be determined after resolving the statutory and administrative questions raised above.

Recommendation: New Investments in Fraud Prevention Should Await Audit and Pilot Results. As noted above, several studies currently under way should be able to provide a fuller evaluation of DMV's problems with license fraud. An audit by BSA is expected to examine the extent and nature of these problems, evaluate the appropriateness of DMV's recent reforms, and recommend administrative, statutory, and budgetary solutions. In addition, a pilot project by DMV and the state DOJ is expected to evaluate how different biometric solutions (involving facial recognition and fingerprint technologies) might be able to reduce fraud.

Both of these projects are expected to be completed this spring. We believe it is prudent to await the results of those projects before investing in a particular reform package. Accordingly, we recommend that the Legislature (1) delete the proposed augmentation at this time, and (2) direct DMV to develop and provide at the May Revision a comprehensive reform package that responds to the fraud issues listed above. The reform package should take into account findings from the BSA audit, DOJ pilot, and other available information. The package should include budget proposals, legislative proposals, and further administrative changes, as appropriate.

Unused Computer Terminal Replacement Funds Should Be Redirected

Over the past three fiscal years, the department has received $3.5 million to replace computer terminals in its field offices. At the time this analysis was prepared, the department had not begun the replacement. We recommend that the funding be redirected to the Department of Motor Vehicles' financial system replacement project and new funding for that project be reduced by a like amount. (Reduce various items by $3.5 million.)

The DMV performs a number of vehicle-related transactions at its 170 field offices throughout the state. Most of these transactions, including driver license issuance, vehicle registration and renewal, and occupational licensing, take place at computer terminals operated by DMV staff.

The department conducted a study in 1997 and 1998 which indicated that the field office terminals were "old, wearing out, and technologically obsolete." It noted that the terminals were failing with increasing frequency; replacement parts were no longer available; and the vendor would not renew the maintenance contract past 1998. The report maintained that equipment failures would cause business disruptions. The report concluded "It is imperative that replacement [of the terminals] start in July 1998 . . . ."

In the May Revision of the Governor's 1998-99 budget proposal, DMV requested a total of $3.5 million over three years to replace the terminals.

It cited the study as justification for the budget request. The requested funds were approved by the Legislature, and were included in the 1998-99, 1999-00, and 2000-01 budgets.

Terminals Not Replaced; Funds Remain. Discussions with the department indicate that, as of January 2001, DMV still had not expended the funds to replace its field office terminals. The department informed us that it has reevaluated its needs, and is considering using the appropriated funds to purchase different equipment than that which was identified in its original budget request.

Funds Should Be Directed to Other Activities. Because the department has not made use of the funding provided to it for replacement terminals, we believe the funds should be redirected to the department's current activities. Specifically, we recommend that DMV redirect these funds to the replacement of its administrative and financial systems, which is currently under way. Doing so will reduce the department's request of $8.1 million to complete this project in the budget year by a like amount. Accordingly, we recommend that the Legislature reduce DMV's budget request by $3.5 million.

Department Should Report on Terminal Needs. Judging from the department's continued use of its old terminals two and one half years past the "imperative" replacement date specified in its 1998 report, it appears that the department's evaluation of its terminal needs was severely flawed. Moreover, the 1998 report is now significantly out of date.

Accordingly, we recommend that the Legislature adopt the following supplemental report language to direct the department to provide a new report on its field office terminal needs. Any new effort to replace the terminals should be based on information detailed in that report.

Item 2740-001-0044—Department of Motor Vehicles

On or before January 10, 2002, the Department of Motor Vehicles (DMV) shall provide the Legislature with a report that evaluates the department's use of computer terminals in its field offices. The report shall (1) describe the department's current equipment, (2) evaluate its suitability for the tasks for which it is used, and (3) recommend actions, including terminal replacement if warranted, which the department believes are necessary to ensure the reliability and efficiency of DMV's legislatively mandated activities.

Replacement Office Should Be Procured by Capital Outlay, Not Lease With Purchase Option

We recommend the South Sacramento replacement office be procured by state capital outlay, not by lease with purchase option with a private developer.

(Please see discussion in the "Capital Outlay" chapter.)

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A-48 ■ **Legislative Oversight: Project Delivery Reports Not Submitted**. Recommend that the department report at hearings regarding the status of two project delivery reports that are overdue.

A-48 ■ **Legislative Oversight: Report on Training Program Overdue.** Withhold recommendation on $11.3 million in ongoing expenditures for a training program pending the Legislature's receipt and review of a report on the program's progress and results to date.

Traffic Operations

A-49 ■ **Electronic Toll Collection Not Yet Fully Tested.** Recommend that the department report at budget hearings regarding its plan to test and complete installation of the electronic toll collection system on the state's toll bridges and the risks involved.

A-51 ■ **More Oversight Needed for Transportation Management Centers (TMCs).** Recommend budget bill language requiring Caltrans to update its TMC Master Plan. Further recommend the enactment of legislation requiring Caltrans to report annually to the California Transportation Commission on TMC performance.

A-54 ■ **Caltrans Needs to Better Maintain Traffic Management Infrastructure.** Recommend that Caltrans report at budget hearings on the estimated cost and schedule of repairing the state's traffic management infrastructure.

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Information Technology at Caltrans

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A-66 ■ **Clear Definition of IT Needed.** Recommend the adoption of budget bill language to require the Department of Information Technology, in conjunction with the Department of Finance, to provide Caltrans with a clear definition of what constitutes an IT project, as it relates to traffic management.

A-68 ■ **Statewide Strategy for Traffic Information Systems Needed.** Recommend the adoption of budget bill language to require Caltrans to convene a steering committee to determine how the department should use traffic information available from ATMS.

Intercity Rail

A-70 ■ **Ridership Increases, as Do State Costs.** Overall intercity rail performance, including ridership and farebox ratios, has improved. State operating costs have also increased.

A-71 ■ **Caltrans Envisions Major Expansion of Intercity Rail.** Caltrans' ten-year rail plan calls for $3.2 billion in capital projects to improve and expand the state's intercity rail service.

A-73 ■ **Significant Policy Implications From Long-Range Plan.** In evaluating Caltrans' ten-year rail plan, the Legislature will need to assess what it wants the state's role to be in funding intercity rail vis-a-vis commuter rail.

A-74 ■ **Growth in Ridership Could Be Substantially Less Than Projected.** With $2.6 billion in capital improvements, Caltrans forecasts annual ridership to grow substantially (from 2.9 million to 5.4 million) over ten years. We estimate that the increase in

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ridership as a result of the capital investment could be substantially less.

A-77 ■ **Budget Requests Implement Ten-Year Rail Plan.** The budget proposes $98 million for track and signal improvements on the three intercity rail corridors. It also proposes a $9.5 million increase in state operating support for added round-trip service on the Capitol and San Joaquin corridors.

A-78 ■ **Based on Ridership, Not All Capital Improvements Justified. Reduce 2660-301-0046 by $77.4 Million.** Recommend deletion of $77.4 million for capital improvement projects on the Pacific Surfliner and San Joaquin corridors because past capacity improvements have not resulted in commensurate ridership increases.

A-79 ■ **Expansion of Service on San Joaquin Corridor Not Justified. Reduce 2660-001-0046 by $4.2 Million.** Recommend deletion of $4.2 million requested for an additional round trip on the San Joaquin corridor because (1) recent increases in round-trip service has not generated new ridership and (2) state operating cost per passenger has increased markedly.

A-80 ■ **Expansion of Service on Certain Segments of Capitol Corridor Premature. Reduce 2660-001-0046 by $1.8 Million.** Recommend deletion of $1.8 million requested to continue operating two new round trips on certain segments of the Capitol corridor because agreement with the private owner of the rail tracks to operate the new trains has not been secured and is unlikely to do so in the near future.

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Rural Transit

Other Issues

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California Highway Patrol

A-87 ■ **Expansion of Traffic Congestion Relief Efforts Overfunded. Reduce Item 2720-001-0044 by $1.3 Million**. Recommend reduction because it will take some time to hire proposed new officers, and full-year funding will not be needed for the positions.

A-88 ■ **El Protector Pilot Expansion Fails to Expand Non-English Outreach Efforts. Reduce Item 2720-001-0044 by $531,000.** Recommend reduction because the six temporary positions created to expand CHP's outreach beyond the Hispanic community have not in fact been focused to educate other ethnic groups. Those positions should be allowed to expire.

A-89 ■ **Existing Funds Available for Data Collection Grants Through 2001-02. Reduce Item 2740-101-0001 by $7 Million and Reappropriate Unencumbered Balance of Current-Year Funds for 2001-02.** Based on current participation rates by local law enforcement agencies, CHP currently has adequate funds to provide racial data collection grants in 2000-01 and 2001-02. The current-year balance should be reappropriated for 2001-02, and no new funds should be appropriated.

Department of Motor Vehicles

A-91 ■ **Fraud Persists in Driver License Program. Reduce Item 2740-001-0044 by $13.3 Million.** Recommend deleting funding for the request at this time. Department should develop and present at the May Revision a comprehensive proposal which makes

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use of new information from the State Auditor and Department of Justice.

A-97 ■ **Unused Computer Terminal Replacement Funds Should Be Redirected. Reduce Item 2740-001-0044 by $3.5 Million.** Recommend that the Legislature reduce the department's funding for the financial systems replacement project it has under way, and direct the department to use its unspent computer terminal funds to backfill this reduction. Further recommend supplemental report language directing department to provide update on field office terminal needs.